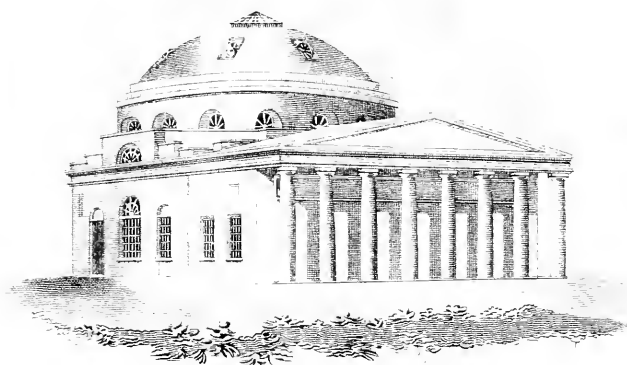




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No. 1

THE RELATION OF BRAIN WEIGHT TO BODY SIZE

THE MATHEMATICAL BASIS FOR THE DUBOIS FORMULA¹

By H. S. RUBINSTEIN, M.D., Ph.D.

BALTIMORE, MD.

One of the earliest attempts to correlate the brain weight with body size occurred when Brandt (1867) compared animals of similar intelligence but of different size with each other and concluded that their brain volumes were proportional to their body surfaces. The first attempt to consider this relationship on a scientific basis was made by Snell (1891) who applied to this field the geometrical fact that two similarly shaped bodies of unequal size but of equal densities, have total surface areas which are related to each other as the 2/3 (.66) power of their volumes or weights.

Since many workers in the field of neurology lack the mathematical background to immediately understand the significance of this relationship and since without a grasp of such an important concept the student is prevented from clearly appreciating a phase of this study which is truly fundamental, it seems advisable to analyze this statement mathematically and report it under a title which will more immediately engage the attention of those interested in brain weight-body weight problems.

From solid geometry it is known that two similarly shaped bodies have surfaces which are proportional to the squares of homologous sides. This may be expressed by

$$(1) \quad \frac{S_1}{S_2} = \frac{a_1^2}{a_2^2}$$

¹ From Neuro-Anatomical Laboratory of the Department of Anatomy, University of Maryland Medical School.

where S_1 and S_2 represent the respective surfaces and a_1 and a_2 , the respective sides. From solid geometry it is also known that two similarly shaped bodies have volumes which are proportional to the cubes of any homologous dimension. This may be expressed by

$$(2) \quad \frac{V_1}{V_2} = \frac{a_1^3}{a_2^3}$$

where V_1 and V_2 represent the respective volumes and a_1 and a_2 again the particular dimension.

From equation (2), it is obvious that

$$(3) \quad \frac{V_1^{1/3}}{V_2^{1/3}} = \frac{a_1}{a_2}$$

i.e., $a_1 = V_1^{1/3}$ and $a_2 = V_2^{1/3}$

Substituting the values of a_1 and a_2 from equation (3) into equation (1), we obtain

$$(4) \quad \frac{S_1}{S_2} = \frac{V_1^{2/3}}{V_2^{2/3}}$$

Hence, if Brandt was correct in claiming the brain weight proportional to body surface, and if body surface (or volume) is proportional to body weight, formula (4) may be replaced by:

$$(5) \quad \frac{E_1}{E_2} = \frac{P_1^{2/3}}{P_2^{2/3}}$$

where E_1 and E_2 represent the respective brain weights (or volumes) and $P_1^{2/3}$ and $P_2^{2/3}$ represent the respective body weights to the 2/3 power.

Accepting this formula (5), Dubois (1898) substituted x for 2/3 in an attempt to determine empirically the true value of the exponent of P .

This was done by converting the equation

$$\frac{E_1}{E_2} = \frac{P_1^x}{P_2^x} \quad \text{or} \quad \frac{E_1}{E_2} = \left(\frac{P_1}{P_2} \right)^x$$

to its logarithmic form

$$\log \frac{E_1}{E_2} = x \left(\log \frac{P_1}{P_2} \right)$$

or

$$\log E_1 - \log E_2 = x (\log P_1 - \log P_2)$$

and solving for

$$x = \frac{\log E_1 - \log E_2}{\log P_1 - \log P_2}$$

Substituting the brain weights and body weights collected by Weber (1896), Dubois thus found x to be .56 instead of .66 for *different* species of mammals. Since this time other studies among other mammals (Lapicque—1898), birds (Lapicque and Girard—1905) and lower vertebrates (Dubois—1913) have confirmed and thus established the value of this exponent for brain weight-body weight relations between animals of similar intelligence but of different species to be .56.

When, however, the formula of Dubois ($E_1:E_2::P_1^x:P_2^x$) was applied between different sized animals of the same species (e.g. 2 dogs etc.), the exponent was shown to be much lower ranging between .22 and .28 (Lapicque—1907 and 1908; Dubois—1898). The lower values .22 to .24 were constantly found in the domesticated species and is believed to be the result of domestication (Klatt—1921). This lower coefficient for the domesticated animals is in keeping with the observations of Sugita (1918) and Donaldson (1924) for the domesticated rat and seems to be due as pointed out by Kappers (1929) to the deteriorating influence of domestication.

SUMMARY

The origin of the Dubois formula ($E_1:E_2::P_1^x:P_2^x$) which correlates the brain weights of two animals with their respective body weights is discussed. This is done so that those unacquainted with the mathematical basis for this formula may grasp its fundamental significance and thus better appreciate future discussions involving this relationship.

Acknowledgment: The author appreciates the interest of Dr. Carl L. Davis, head of this department, upon whose advice this paper was written.

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CLOSED METHOD OF DRAINAGE FOR EMPYEMA¹

By E. PAUL KNOTTS, B.S., M.D.

DENTON, MD.

Empyema occurs with sufficient frequency to constitute a major problem in the practice of medicine. It occurs in slightly more than 3 per cent of all cases of pneumonia. It is rather more common in children than in adults. The organism found in approximately 75 per cent of the cases is the pneumococcus and the streptococcus occurs in a large proportion of the remainder. The mortality varies according to age, being very high in infants under one year of age. The presence of the streptococcus hemolyticus gives a bad prognosis. Serious underlying morbid conditions may actually push the empyema into the background as the major illness. The mortality is further affected by the promptness of the diagnosis and the subsequent initiation of proper treatment. Open operation done in the first week or ten days carries a mortality as high as 25 per cent; undiagnosed or neglected it usually leads to chronic empyema or to a fatality.

No attempt will be made in this paper to discuss special forms of empyema, as apical, interlobular, diaphragmatic, multilobular, traumatic, metastatic, tuberculous or those complicated by bronchial fistula, although many of these cases are best treated by the closed method of drainage.

Metapneumonic empyema is essentially not preventable and having occurred offers the problem of cure. This resolves itself into

- (a) Evacuation of the pus,
- (b) Obliteration of the empyemic cavity,
- (c) Restoration of position, function and equilibrium of the anatomic parts concerned.

Following in the wake of so devitalizing a disease as pneumonia, a large amount of toxic material in contact with an actively absorbing surface is a menace to the patient's life, obviously the pus should be

¹ Read before the Caroline County Medical Society with presentation of cases.

removed as promptly as possible. The older conception that empyema is an abscess of the chest and merited and received the widest sort on incision and drainage has been considerably altered in view of the fatal accidents and high mortality resulting and has strengthened the more conservative methods of treatment.

The most ardent advocate of open thoracotomy admits that if this method is followed it should not be done until there has been time for adhesions to form at the remote borders of the empyemic cavity, splinting the lungs and the mediastinum. In streptococcic infections of the pleura adhesions do not form readily if at all and it is a guess when to expect adequate adhesions to form when other organisms are the infecting agents. Usually ten days to two weeks are permitted to elapse before rib resection is done. However much can be done in this interval. For the purpose of diagnosing the presence of pus, of determining the organism responsible for the illness and in the hope of aborting the condition, exploratory puncture should be resorted to early and repeated daily until it is clearly demonstrated that more drastic measures must be undertaken to relieve the condition. Now if the patient is removed to the operating room and as is common with children, is given a general anesthetic, subjected to the surgical shock, hemorrhage and the injury to the mediastinal contents due to the sudden and complete release of the pus and the subsequent rushing in of air, all incident to rib resection, then certainly additional hazards have been superimposed on an already formidable illness. All this can be avoided and the pus removed safely and completely by the closed method of drainage.

The procedure is very simple and if the patient is too ill to be moved, the operation can be done at the bedside. The point for operation should be at or slightly in front of the posterior axillary line and between the seventh and eighth ribs. Under careful antiseptic technique and after infiltrating the area down to and including the pleura with .5 per cent novocain, and with the arm drawn upward and forward to spread the ribs, the trocar is pushed between the ribs into the empyemic cavity. The trocar should be of such caliber that a No. 14 French catheter fits very snugly in the cannula.

On withdrawal of the trocar pus will come surging out through the cannula and this for the moment prevents the entrance of air. This opening should be sealed at once by the sterile finger. Now the catheter, its distal end clamped, should be threaded through the cannula into the pleural cavity to a distance of 3 cm. The cannula can now be slipped out leaving the catheter in situ. The last half inch of the catheter may be cut off, reversed and slipped down the tube next to

the chest wall. A safety pin passed through it can be used as an anchor and adhesive strips placed across it to the chest wall. Care should be taken that at no time is the catheter not clamped. A dressing should now be placed around the area where the tube enters the thorax. The free end of the catheter closed by a small clamp can be brought around and secured in a prepared pocket of a vest which the patient will wear. Now aspiration and irrigation are ready to be performed and can be done with that degree of rapidity which the particular case merits. When done quickly and skillfully the patient will be no worse after than before the operation was done.

In the beginning aspiration should be done every two to three hours and the time interval increased as the condition abates. It is not wise to remove more than 200 cc. at one time. A luer syringe can be used to exert suction and serves to measure the amount of pus withdrawn. As the pus is withdrawn the lung has no competition as when air is present and can unfold and fill that portion of the cavity drained. Too great a negative pressure exerted by the suction syringe will result in some pain and cough and should be avoided. After each aspiration an antiseptic solution should be instilled. For this purpose chlorinated soda has been found to be superior to all others. Its virtues have made success of the closed method of drainage more certain than if it were not available. It has been demonstrated that (a) irrigation of empyema cavities with surgical solution of chlorinated soda sterilizes the cavity and promotes healing; (b) it has a valuable solvent action on granulation tissue, gradually frees the lungs from excessive scar tissue, allowing it to expand and fill the cavity and at the same time prevent the contraction of cicatricial bands which would sequestrate infected areas; (c) it readily liquifies the flakes of fibrin which otherwise would vitiate the closed method since even moderate sized flakes would occlude the lumen of the necessarily small drainage tube used in children.

The number of cc's aspirated is noted and half that quantity of Dakin's solution is instilled. This is not an absolutely arbitrary rule and may admit of some variation. The solution should be prepared fresh and warmed to body temperature for each instillation. The act of withdrawal of pus and instillation of the antiseptic is easily done without special training on the part of the attendant and is attended by so little discomfort to the patient that the procedure can be performed without awaking him if asleep. In the waking hours the presence of the tube does not prevent prescribing such exercises as are conducive to recovery and there is not the messy pus-soaked dressings requiring frequent changes as in the open drainage cases.

How long should the tube remain in the thorax? As long as there is frank pus and until the cavity has been obliterated. To assist in determining this X-ray examination of the chest should be done at such frequency as the individual case prompts. Usually the desired end will be accomplished in three to six weeks. It is possible to remove the tube a little too soon without serious consequences as a sinus is formed by the tube bounded internally by moderately heavy adhesions, which tends to persist until all pus has escaped and permits easy re-entry of the tube in the event that becomes necessary.

Careful attention to nutrition, massage, passive and active exercises are important considerations in hastening the recovery of the patient. Forcible respiratory movements should be started early to assist the lung in unfolding and assuming its original vital capacity. Wolff bottles offer an admirable and simple apparatus to accomplish this purpose.

SUMMARY

The shock and hemorrhage incidental to a major operation and the injury to the thoracic viscera when open thoracotomy is done is avoided and graduated, painless and efficient relief can be effected by the method described.

The presence of air in the empyemic cavity renders it more difficult to sterilize that cavity and certainly healing will proceed more rapidly if the parietal and visceral pleura are approximated.

Re-expansion of the lung, with the consequent restoration of position and function of the thoracic viscera is obtained more quickly than when there is a quantity of air in the pleural cavity which must be adsorbed before the lung can unfold.

Closed method of drainage is a relatively simple and conservative procedure and offers a distinct hope of lessening the mortality of empyema.

COMPLETE HEART BLOCK FOLLOWING THYROIDECTOMY; AUTOPSY EVIDENCE OF RHEUMATIC CARDITIS¹

By T. NELSON CAREY, M.D.

BALTIMORE, MD.

Though heart block in its different manifestations is probably one of the most unusual complications of thyrotoxicosis, it apparently is common enough to demand more attention than it usually receives. Clinical heart block is rarely observed, but since the advent of the electrocardiograph, abnormalities in conduction have been observed with a moderate degree of frequency.

Merklen (1) in 1881 reported epileptiform seizures accompanying attacks of ventricular standstill in a patient who had had exophthalmic goiter for six years. Krumbhaar (2) in 1918, in reporting electrocardiographic examinations of a series of fifty-one thyrotoxic patients, found eleven with evidences of arrhythmia. Of these, two had a prolonged P-R interval. He quoted Reilingh (3) as stating that more advanced degrees, even complete heart block, might occur with exophthalmic goiter.

Goodall (4) in 1920 mentioned frequent prolongations of the P-R interval, at times even exceeding the rest time of the heart. Kerr and Hensel (5) in 1922 studied 181 patients with goiter, hyperplastic and adenomatous, toxic and non-toxic, and reported three with a P-R interval of 0.20 second, and arborization block in one case.

Willius, Boothby and Wilson (6), and Willius and Boothby (7), in different publications reported a study made on 377 consecutive thyrotoxic patients. Sino-auricular block was observed twice in exophthalmic goiter and once in toxic adenoma. This, they found, was always a transient change. One patient with exophthalmic goiter had a P-R interval of 0.28 second, which was not influenced by atropine. Dameshek (8) in 1924 analyzed 141 cases of thyrotoxicosis. Twenty-seven of these patients had arrhythmias, five of which were heart blocks of different degree. Two patients gave evidence of delayed conduction time; two had complete heart block with a tendency to change from one type of block to another, and occasionally the electrocardiograms became entirely normal. One patient had a right bundle branch block. This author made the following observation: "The presence of delayed conduction time is interesting in that

¹ From the Department of Medicine, University of Maryland Medical School.

it has recently been taken to mean acute myocardial damage. . . . Most interesting are two cases coming on under observation and in apparently normal hearts. The first case was entirely paroxysmal and cleared up after passing thru stages of partial block. The second case was the unfortunate one of a young man who, after five months in bed, developed complete heart block. It is noteworthy that the metabolism, whenever recorded in this group, was of the highest, plus 60 per cent or more."

Simon (9) in 1927 reported a woman of 50 with a very large goiter, partially substernal, who, three days after operation developed high fever, delirium, and a pulse of 30 or 40 to the minute. She had received digitalis after operation and was treated with atropine. This author seemed to relate the block to vagal effect and probably feels that it was due to sino-auricular standstill.

Andrus (10) in 1929 reported electrocardiographic examinations done on 86 thyrotoxic patients admitted to the Johns Hopkins Hospital. Sixteen of these patients had arrhythmia; one, auricular extrasystoles; four, transient auricular fibrillation; and ten, established auricular fibrillation. One patient had A-V block.

Levine and Walker (11) in 1929 reported one patient with bundle branch block and one who had Stokes-Adams attacks, disappearing after operation. The intervals lasted from three to eight seconds and from electrocardiographic evidence were found to be due to sinus pauses. This patient, who was a 57 year old man, whose basal metabolism was plus 51 per cent, also had transient attacks of auricular fibrillation.

REPORT OF CASE

This patient was a white woman of 32, who was admitted to the University Hospital on March 22, 1931. Her chief complaint was nervousness which had become very troublesome in the past two or three weeks. About a year before admission, she had noticed a swelling in her neck which grew very rapidly in the two months before admission. She had lost a moderate amount of weight, her appetite had been good until shortly before she came into the hospital, and she was troubled by general restlessness. The only important incident in her past history was that she had had a multiple arthritis in 1928 which lasted several months.

Examination showed a well developed but poorly nourished white woman, who was restless and flushed, with redness over the bony points of the back and extremities. The thyroid was moderately enlarged, firm and symmetrical; there was moderate exophthalmos. Fine and coarse tremors of the hands were present. The lungs were negative except for a tendency to broncho-vesicular breath sounds over both upper lobes. A high-pitched systolic murmur was heard at the cardiac apex and transmitted to the axilla. The heart was apparently normal in size. Blood pressure was 145/85; heart rate 110 to 120.

The teleoroentgenogram showed a heart that was within the normal size limits.

Both lung fields were found to be studded with small, shot-sized shadows, quite dense, which were considered tuberculous in origin. Urinalyses, blood picture and Wassermann test were negative. Basal metabolic rate was reported as plus 51 per cent on one occasion and plus 44 per cent on another. The electrocardiogram was negative except for a sinus tachycardia.

Due to mild tonsillitis, the patient had a moderate fever toward the end of her first week in the hospital, which subsided after a few days. She was given the usual preoperative treatment of high caloric diet, Lugol's solution, and complete bed rest. On April 16th subtotal thyroidectomy was done under avertin anesthesia. Immediately after operation she was moved to the Air Conditioning System and pursued a very satisfactory course for the next three days, returning to the ward on April 19th. On the morning of the 20th, on counting her pulse, it was noticed that she was having coupled beats, both at the apex and wrists, with a rate of about 90 to the minute. Although the coupling suggested digitalis intoxication, she had had no digitalis at any time during her stay in the hospital. On the morning of April 21st, there was a sudden attack of faintness which lasted a few seconds. Just after this, the nurse found that her pulse rate was only about 40 to the minute. Her pulse was watched carefully throughout the morning and when seen again at 12.30 P.M., it was reported that the rate had varied between 64 and 48 all morning, with sudden transitions.

When seen, she was lying back quietly, rather pale, but with some color to the cheeks and fairly good color to the mucous membranes. Her pulse was totally irregular—48 to the minute at apex and wrist. Suddenly there was a complete cessation of heart beat for about fifteen seconds, accompanied by extreme pallor and slight restlessness, followed by a sudden resumption of systole with immediate return of color to the face. The rate then assumed was about 70 to the minute with a quadrigeminal rhythm, every fifth beat apparently dropped. Toward the end of a rather short period, the rhythm became bigeminal.

The patient had about six of these perfectly typical Stokes-Adams attacks in ten minutes, the assumed rhythm varying from a very slow, totally irregular pulse, to a rate of 65-70 with trigeminal, bigeminal and quadrigeminal rhythm. No sounds were heard at the apex to fill the gaps in the pulse.

With every period of asystole, a progressive pallor immediately supervened, color returning with the first following systole. During one attack there was evidence of a beginning convulsive seizure, cut short by resumption of systole. Dyspnoea was rather marked during the longer attacks. At about 12.45 asystole became permanent. Pallor occurred as before with increasingly deep and rapid respirations. After about a minute pallor was replaced by cyanosis and extreme dyspnoea with restlessness and dilatation of the pupils. The restlessness was marked but there were no true convulsions. The patient soon relaxed, and died about 12.48 P.M.

On autopsy the heart measured 15 cms. transversely and the pericardial sac was partially obliterated by dense fibrous adhesions, particularly over the right ventricle in the area extending from the coronary sulcus, about 3 cm. toward the apex. There was a small area of fibrous adhesions over the left ventricle. There was no evidence of any acute pericarditis. The heart weighed 350 grams and was of a soft, flabby consistency. There were no evident lesions in the chambers of the heart. The mitral valve was slightly thickened and scarred, particularly along the free borders of the cusps; no active vegetations were found, though it appeared as though it had been the site of an old rheumatic endocarditis. The endocardium was thickened throughout and somewhat white and translucent. The myocardium was rather pale, flabby and edematous.

Microscopically, one section of the heart muscle showed some thickening of the coronaries and a slight amount of fibrosis. There were some hemorrhage and cellular infiltration between the muscle bundles with thickening of the endocardium. A block taken from the region of the bundle of His showed more acute changes than the rest of the heart muscle. There were degeneration and fibrosis of the muscle bundles in this neighborhood, with accumulations of leucocytes along the small blood vessels and between the muscle bundles. No characteristic lesion could be found in this area. Because of the old pericardial adhesions, and the acute tonsillitis which



FIG. 1. ASCHOFF BODY IN SUBENDOCARDIAL TISSUE OF LEFT AURICLE. ($\times 100$)

had occurred before operation, further sections were taken. Those from the left auricular wall were especially interesting. In the subendocardial tissues several rather large areas of leucocytic infiltration were found, containing both polymorphonuclear leukocytes and round cells. In the center of these areas were collections of much larger cells, resembling those first described by Aschoff as characteristic of rheumatic infections. (See illustration.)

The left lung was bound down by dense, fibrous adhesions from apex to base by a markedly thickened pleura. On the right side a few apical adhesions were present. Many small, shotty, calcified nodules were found scattered throughout both lungs,

varying in size up to 2 millimeters in diameter. They were especially found throughout the subpleural tissues and were located in the parenchyma of the lung without regard to bronchial distribution. Microscopically the nodules appeared to be made up of an amorphous, pink-staining substance, encapsulated in lung tissue. There was no evidence of bronchial epithelium surrounding the nodule and no cartilage was present. Some smaller nodules were found in the liver and the spleen. A section of the surgically removed thyroid was characteristic of a partially involuted exophthalmic goitre.

Though no portable electrocardiograph was available to study this patient's Stokes-Adams attacks, it was felt that they were due to changes from complete to partial heart block. The characteristic rheumatic pathology found at autopsy indicated that rheumatic carditis, in addition to hyperthyroidism, was responsible for this patient's death. The calcified nodules in the lungs were, of course, not considered to have anything to do with her illness or death. It was suggested that they were due to an old healed tuberculosis of miliary distribution, as there was some scarring at one apex and calcification of the hylic nodes.

This patient corresponds closely to those recently reported by Davis and Smith (20). They report six cases of complete heart block associated with hyperthyroidism. Three of these patients had acute tonsillitis a short time before the arrhythmia appeared. One patient had scarlet fever. Two cases were thought to be due to the effect of digitalis plus hyperthyroidism. As noted by these authors, in the case reported by Merklen (1), the attacks followed several days after an acute respiratory infection. They also report a case described by Eason (13) in 1930. A young woman with exophthalmic goiter developed fever of several weeks' duration after a tonsillectomy. Shortly afterward a syncopal attack, with arrhythmia, occurred. Electrocardiogram indicated a partial heart block; recovery occurred. Two cases reported by Cameron and Hill (14) are also noted. One developed heart block three weeks following acute tonsillitis, the other, four days after tonsillectomy which was done three weeks after tonsillitis. Both patients had exophthalmic goiter.

Of the six cases reported by Davis and Smith, only one patient, who had had acute tonsillitis; died. Autopsy disclosed extensive cellular infiltration of the bundle tissue; just beneath the endocardium in the interventricular septum several collections of gram-positive bacteria were found, probably streptococci.

It is evident, from the rarity with which it is mentioned, that complete heart block, with or without Stokes-Adams attacks, is unusual in the presence of thyrotoxicosis. Minor degrees of conduction disturbance, as evidenced by electrocardiographic records, are also ap-

parently unusual. The 242 cases of prolonged conduction time, reported by Goodall (15) in a series of 787 cases, are so much at variance with other reports, that this author's statistics are possibly open to criticism. Only 14 of these cases gave rise to clinical symptoms, the remainder were conduction abnormalities found by electrocardiographic examination.

The high incidence of infection in thyrotoxic patients with heart block of various types, is certainly noteworthy. In at least nine cases, the disturbance in conduction was preceded by acute infections. In this series only two autopsies are recorded, that reported by Davis and Smith and the case described in the present paper. Both of these gave abundant evidence of acute cardiac infection, streptococcic in one case and rheumatic in the other.

It is difficult to draw many inferences from such a small series of cases. Certainly, the importance of infection in the induction of heart block in the thyrotoxic heart is evident. It is also noteworthy that five patients developed block after operation, and in four of these the operation (tonsillectomy or thyroidectomy) followed shortly after an upper respiratory infection.

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THE CONSERVATION OF SKIN IN RADICAL MASTECTOMY FOR MALIGNANCY

By NATHAN WINSLOW, M.D.

BALTIMORE, MD.

For some years, the members of the staff at the University of Maryland Hospital have been conserving enough skin to cover the wound in amputation of the breast for malignancy. This policy was adopted to spare the patient the necessity of a skin grafting or the annoyance incident to the slow healing associated with granulation, cicatrization and epithelization of the wound so often left by the customary practice of sacrificing the skin covering the entire breast. Accordingly, during the past decade with but few exceptions such as huge growths, the incision has been made with a view to obtaining primary closure of the wound by direct approximation of the edges of the skin. To obtain the desired amount of skin for this purpose, the incision is varied according to the location and size of the tumor. The accompanying illustration shows the principle pursued in the ablation of a growth situated in the upper and inner quadrant of the mammary gland. The pectoral muscles are sometimes sacrificed and at other times spared according to the preference of the individual operator, but the facial coverings of these muscles are always dissected away.

We reasoned if it were safe to preserve the skin covering the axilla in axillary metastasis which nobody ever excises, the custom of sacrificing the skin overlying the entire breast was unnecessarily radical.¹ Since adopting this course, local recurrences have not been any more frequent than when the integumentary covering of the entire breast was removed. Moreover this is a great boon to the patient, because the skin covering

¹ In this connection Horsley says: It is not necessary to make an exceedingly wide skin incision for excision of cancer of the breast, which in the development of this operation appeared to be essential. (Horsley, J. S.: *Operative Surgery*, St. Louis, C. V. Mosby Company, 1928, 3. Ed.; P. 72, line 10 from bottom.)

the operative site will be free, pliable and non-adherent rather than thin, shiny, glistening, adherent and tender.

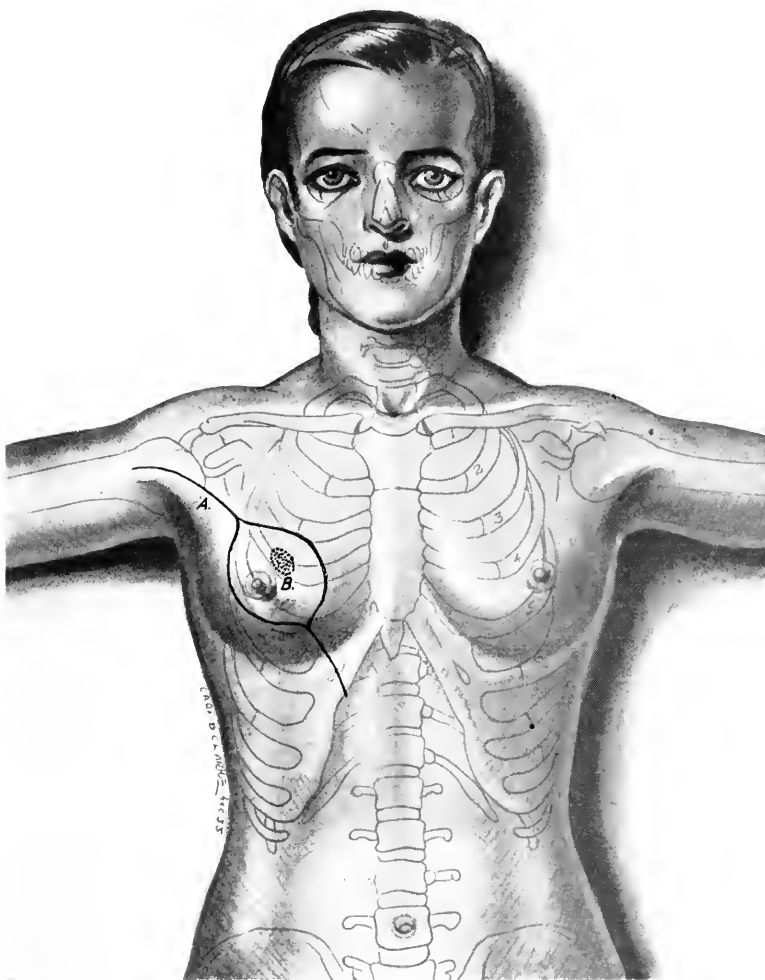


FIG. 1. INCISION FOR RADICAL AMPUTATION OF THE BREAST

In a recent issue of the *Annals of Surgery*, Friedman² advocates even less excision of skin than we have deemed advisable to practise. He produces two reasons in support of his contention, viz.: (1) sections made of the skin

² Friedman, L.: Skin Conservation in Radical Mastectomy for Carcinoma, *Ann. Surg., Phila.*, **107**: 844, 1933.

above the mass show no change from the normal, if the skin is non-adherent and (2) the skin covering the axilla is never removed in the presence of axillary metastasis. He says, if it is safe and experience teaches that it is, to conserve the skin covering the axilla in the presence of axillary metastasis, is not it reasonable to preserve and to utilize the integument of the breast distant from the tumor? Conversely, if it is important to remove the skin covering the breast far away from the tumor, how much more important would it be to excise the skin of the axilla. In this method, the outline of the skin incision, as in ours, depends upon the extent and location of the growth, the amount of adherent and involved skin and the judgment of the surgeon. It must necessarily vary. In smaller tumors, the skin of more than half of the breast can be saved and made available for suture. He claims that it is safe to carry the incision up to but not into the areolar tissue surrounding the nipple.

We agree with Friedman that this is the method of choice in excision of the breast for malignancy because (1) it gives the patient greater comfort, (2) it permits better motion of the arm, (3) it does not jeopardize the chances of the patient's recovery any more than the customary incisions and (4) it is relatively safe. It should not, however, be attempted in far advanced cases, nor when the skin has been invaded.

BULLETIN

OF THE
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THE CAMPAIGN IS PROGRESSING

THE CAMPAIGN TO RAISE FUNDS FOR THE EQUIPMENT OF THE NEW
UNIVERSITY OF MARYLAND HOSPITAL AND FOR THE CONVERSION
OF THE OLD UNIVERSITY HOSPITAL INTO AN OUTPATIENT
CLINIC IS WELL ON THE WAY

When Governor Ritchie approved the bill authorizing a bond issue of \$1,500,000 to construct a new University of Maryland Hospital, he did it with the assurance that the friends of the hospital would raise, with the assistance of the public, such additional funds as would prove necessary to complete the project. The purchase of the land and the costs of construction have entirely absorbed the appropriation. Further funds will be required to purchase the equipment for the new hospital and to recondition the old hospital as an outpatient clinic.

To complete the new University of Maryland Hospital and to alter the old University Hospital, the contribution of the State must be supplemented by at least \$170,000. Fellow alumni, you will be pleased to hear that over \$105,000 of the total have already been subscribed. This is encouraging to those who have the success of the undertaking at heart. We are well on the way, but to complete our task, we need your help. Will you not, therefore, lend us a hand in the consummation of this project? If you cannot give yourself, perhaps you can influence a patient or a friend to send a contribution through you. Any amount will be most welcome, for it is not the amount that counts, but the spirit behind the gift.

Ere ye forget, send in your check to the Treasurer, University Hospital Campaign Fund, Lombard and Greene Sts., Baltimore, Md.

For your convenience you will find on the inside of the back cover a form that you may fill in for your subscription.

BOOK REVIEWS

The Modern Treatment of Syphilis, By J. E. Moore, M.D. Published by Charles C. Thomas. 535 pages.

At last, we have at our command a clear concise presentation of modern syphilis therapy, which can be as easily read by the general practitioner as by the specialist.

This is not a mere tome of antisyphilitic drugs and of dogmatic plans of treatment, although this part of the subject is competently presented with an understandable style, which will appeal alike to all branches of the profession. Dr Moore goes further, and embraces in his book almost every conceivable phase of treatment of syphilis, a knowledge of which should be necessary for the proper appreciation and practise of syphilology. To point out an outstanding chapter is difficult, because every chapter forms a necessary cog for the man who wishes to treat syphilis. One can hardly afford to miss reading and studying any portion of this book, if one is anxious to keep abreast of syphilis knowledge. The untoward reactions to drugs are explained in an able manner and caution in their use is stressed. It is pointed out that careless indiscrimination in administration of antisyphilitic drugs frequently defeats the goal of cure or arrest aimed at. I consider that the chapters on the treatment of Early Syphilis, of Neurosyphilis, Cardiovascular Syphilis, Wassermann Fastness and the chapter on the Interpretation of Serologic Tests, are epics, worth careful study.

I do not think that reading this book will make a syphilologist out of every physician. Only the handling of large numbers of patients and careful observation will help do that, but it will better prepare a physician to treat or not to treat his syphilitic patients and it may even induce the therapist to give his patient a "good break" by sending him or her, to a syphilis specialist when he finds himself and his patient in trouble. Certainly, the patient who has contracted syphilis is in sufficient trouble without the added handicap of an untrained physician improperly and inadequately treating him.

I urge all who can, to obtain this book and to read it from cover to cover.

H. M. ROBINSON, M.D.

The Management of Fractures, Dislocations and Sprains, by John Albert Key, B.S., M.D., Clinical Professor of Surgery, Washington University School of Medicine, etc., and H. Earle Conwell, M.D.,

Orthopedic Surgeon for the Tennessee Coal, Iron and Railroad Company, Birmingham, Ala., etc. St. Louis: The C. V. Mosby Company, 1934. 1164 pages, with 1165 illustrations. Cloth, \$15.00 net.

Shifting policies, changing methods and new knowledge create the need for new books. During the past decade, the treatment of fractures has undergone radical changes. It is with these newer lines of handling broken bones, especially the complicated fractures incident to modern life that this book will be found particularly helpful, not that the older and well tested measures are neglected. Students, general practitioners and surgeons will find in it a practical book. The treatment of the special fractures is reliable and the various steps necessary to obtain a satisfactory result in the fracture at hand fully described. We have no hesitancy in recommending the book to those of our readers who may be looking for a sound treatise on fractures and dislocations.

Medico-Military Symposium under the Auspices of the Kansas City Southwest Clinical Society and the Medical Department, Seventh Corps Area, United States Army. Kansas City, Mo.: Brown-White Company.

This little booklet contains in abstract form the papers read, March 12-16, 1934, before the Congress of the Kansas City Clinical Society. The addresses cover a wide field on subjects of practical import to the practising physician. The chief value of the volume, however, is that it contains an easily accessible record of the articles presented at the meeting. If finances will permit, it is to be hoped that in the next volume the addresses will be published in full. Such a policy would add materially to the usefulness of the publication.

PROCEEDINGS

OF THE

UNIVERSITY OF MARYLAND BIOLOGICAL SOCIETY

Officers of the Society

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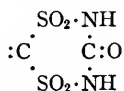
O. G. HARNE, *Treasurer*

HARVEY G. BECK, C. O. APPELMAN, EDUARD UHLENHUTH, E. VANDEN BOSCHE, *Councillors*

The Forty-ninth Program Meeting of the University of Maryland Biological Society was held at 8.30 P.M. on Tuesday, May 16, 1933, in the School of Pharmacy Lecture Room. Dr. John C. Krantz, Jr., the President, presided over the meeting. Papers were presented by Noel E. Foss, M.S. and by John C. Bauer, M.S. Below are abstracts of the papers:

Derivatives of Methylenedisulphonic Acid. By JOHN C. BAUER and GLENN L. JENKINS, Department of Pharmaceutical Chemistry, University of Maryland School of Pharmacy.

Since the chemotherapeutic concepts of the members of the two outstanding groups of hypnotics, the methylenedisulphonic acid group and the malonylurea group, link their physiological activities with their characteristic molecular structures, it would seem logical to conceive of a compound having a structure which would include the hypnophore groups of both of these series. The basic structure of such a barbituric acid, sulphone hybrid would be:



The work here reported had as its aim a study of the problems which might be presented by the synthesis of such a compound, and as its hope the preparation of the hybrid methylenedisulphonurea structure shown above.

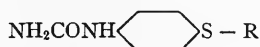
A series of experiments were conducted which resulted in the preparation of a number of derivatives of methylenedisulphonic acid. The cyclic ureide was not obtained but data were collected which may be of value in future attempts to synthesize this compound.

Some Unsymmetrical Sulphides. By NOEL E. FOSS, Department of Pharmaceutical Chemistry, School of Pharmacy, University of Maryland.

Many studies have been made concerning the bactericidal activity of phenols. Recently it has been discovered that hydroxydiphenylsulphides possess greater bactericidal activity than the most active members of the phenol family. Aryl sulphides have been studied by Johnson and Hilbert, Johnson and Bass, and Dunning,

Dunning and Drake, while alkyl aryl sulphides have been studied by Miller and Read and others.

The present investigation was concerned with the possibilities as urinary anti-septics of some of the derivatives of 4-ureaphenylsulphide-R



where R may be phenol, metacresol, resorcinol, or thymol. P-nitrophenylsulphide was prepared by the method of Zinke and Lenhart and the nitro compound reduced to the corresponding amine by the hydrogen platinum catalyst method. The amine was converted to the ureide by condensation with cyanic acid. The acetates, brom derivatives, and certain azo dyes were prepared as a further characterization of these compounds. In all, twenty eight compounds were prepared.

Bacteriological tests were made on the ureides both with *Staphylococcus aureus* and *Bacillus typhosus*. According to the theory that germicidal activity is a function of the lipoid solubility and hence inversely proportional to the solubility in water, one would expect these compounds to have a very high phenol coefficient. However, the bacteriological results have not been very satisfactory, due to the extreme difficulty of getting into solution the compounds to be tested. Only the thymol ureide showed any activity and that was rather slight.

The pharmacological results have been somewhat more noteworthy. They were performed on the cat and rabbit. It was definitely shown that the ureides were eliminated through the kidneys. For studies on respiration and blood pressure, a 1-200 solution of the sodium salt of the ureide was injected into the cat by means of the femoral vein. The carotid blood pressure and respiration were recorded by a chymograph in the usual manner. It was conclusively demonstrated that these compounds produced no effect on the blood pressure or respiration when administered at a normal rate of flow. All the compounds possessed very low toxicity. The phenolphthalein function test of the kidney was not affected by any of these compounds.

The Fiftieth Program Meeting of the University of Maryland Biological Society was held at 8.30 P.M. on Tuesday, June 6, 1933, in the Chemical Amphitheatre of the School of Medicine. Dr. F. A. Ries, the Secretary, presided over the meeting. An abstract of the paper read by members of the staff of the Department of Pharmacology is presented here:

The Fate of Mannitol and Mannitan in the Animal Body. By C. JELLEFF CARR,¹ RUTH MUSSER and JACOB E. SCHMIDT with JOHN C. KRANTZ, JR., Department of Pharmacology, School of Medicine, University of Maryland.

The metabolism of mannitol and mannitan in the white rat was studied. Mannitol was found to cause an abundant storage of glycogen in the liver; on the other hand mannitan was incapable of increasing the liver-glycogen content when fed to white rats. Mannitol did not increase the respiratory quotient, whereas mannitan produced a slight but significant increase in the respiratory quotient. This effect was found to be due to the mobilization of tissue glycogen when mannitan was adminis-

¹ Emerson Fellow in Pharmacology.

tered. There was no significant difference found between the acute toxicities of the two compounds. Mannitol produced a slight hyperglycemia in rabbits, whereas under the same conditions mannitan failed to produce a rise in blood sugar.

The Fifty-first Program Meeting of the University of Maryland Biological Society was held Tuesday, October 24, 1933, at 8.30 P.M. in the Chemical Amphitheatre of the University of Maryland Medical School. Dr. John C. Krantz, Jr. presided. Dr. C. O. Appleman, Dean of the Graduate School of the University of Maryland, delivered an address on "Philosophical Attitudes in Biological Research."

The Fifty-second Program Meeting of the University of Maryland Biological Society was held Tuesday, November 14, 1933, at 8.30 P.M. in the Chemical Amphitheatre of the University of Maryland Medical School. The President, Dr. John C. Krantz, Jr., presided. The following is an abstract of the paper presented before the Society by E. E. Painter and O. G. Harne:

Uterine Contraction Types in the Rat. By E. E. PAINTER and O. G. HARNE, Department of Physiology, School of Medicine, University of Maryland.

Uterine contractions may be observed in the excised uteri of white virgin rats from three days of age throughout life. They were recorded by an improved method which was previously described. In the very young, the contractions are low with broad peaks. As the animals mature, the curves increase in amplitude with some proportion to the increasing tissue mass for the first three weeks. From 21 days on, there is evidence that some mechanism having power to alter tonus and the type of contraction has gained control and the contraction types are no longer smooth curves, but have an irregularity, which has been called composite. This influence can be detected at periods throughout the life cycle, but exists to different extents, reaching a maximum deviation during active sexual life when there is a definite pituitary and ovarian control. The contraction types of animals immediately before sexual maturity closely resemble those of animals in menopause, but are distinct from those of sexually active animals. The question arises, what is the mechanism controlling tonus and type of contraction? Is there a contraction type for each tissue characteristic or is it controlled by the ovarian and other hormones? To this end, animals were first ovariectomized and at intervals following ovariectomy the uteri were excised and the contraction types were observed. It was found that the spontaneous activity of these excised uteri resembled that of the immature animals and the animals in menopause. (Only the maximum deviations were absent.) Therefore, the ovary alone cannot mediate control of either the tonus or type of contraction observed in the sexually immature, menopause, and ovariectomized animals. It must be then either some hormonal control or an inherent characteristic of the tissue. Working upon these hypotheses, experiments were performed by appropriately altering the method and apparatus so that the activity of the longitudinal and circular muscles could be studied normally and also under the influence of various hormones. The observations and records reveal that the contraction types are a result

of an interplay of longitudinal muscle activity and the phenomena associated with circular muscle response with concurrent intrauterine tension changes. They are not a result of ovarian or hormonal action per se, but these substances affect the contraction types as the cyclic changes resulting therefrom, affect the irritability and the activity of the two muscle systems through distention, congestion, and the presence of uterine milk.

The Fifty-third Program Meeting of the University of Maryland Biological Society was held on Tuesday, December 5, 1933, at 8.30 P.M. in the Chemical Amphitheatre of the University of Maryland Medical School. Dr. John C. Krantz, Jr., the President, presided. Abstracts of the papers presented before the Society follow:

Pulmonary Circulation. By CYRUS F. HORINE, M.D., and C. GARDNER WARNER, M.D., Departments of Operative Surgery and Pathology.

A method for approaching great vessels of the heart and lungs without producing a pneumothorax in the dog has been presented to this Society. The distribution of the pulmonary and bronchial circulation has been studied. The bronchial artery capillaries anastomose with the pulmonary vein capillaries. This confirms the work of William Snow Miller and others. This work was done without producing a pneumothorax and also presented to this Society. Pulmonary artery pressures were measured with a small mercury manometer. A needle was introduced into the pulmonary artery without producing pneumothorax. This needle was connected to the manometer with rubber tubing. Inspiration causes a fall in pressure during systole and diastole. Expiration produces an increase in pressure during systole and diastole. Maximal pressures averaged 16 mm. (systolic) in six experiments. Wiggers reports a maximal systolic pressure of 43 mm. Branches of the pulmonary artery have been ligated without producing a pneumothorax. An anatomical study was made early after ligation. We also made an anatomical study of the lung tissue as long as fifteen months after ligation of a branch of the pulmonary artery. The ligated lung shows evidence of atelectasis and emphysema. An anatomical study after prolonged ligation shows perivascular increase in connected tissue. The pleura shows evidence of either an increase in the size of pre-existing bronchial vessels or the formation of new arteries. The non ligated lung shows evidence of emphysema or hypertrophy. Ligation of one pulmonary artery causes a displacement of the heart and mediastinum to the affected side. The ligation of a branch of the pulmonary artery shows a fall in systemic pressure which returns to normal in about ten to twenty seconds and this compensatory rise is probably caused by an increase in peripheral resistance in the systemic circulation. An open pneumothorax produces an increase in systolic and diastolic pulmonary artery pressures both in inspiration and expiration. The greatest increase, however, occurs during inspiration. Along with the increase in pressure, there is slowing of the rate.

A Pharyngeal Inspiratory Reflex of the Cat. By HARRY A. TEITELBAUM, B.S.,¹ and FERD A. RIES, M.D., Department of Physiology, School of Medicine, University of Maryland, Baltimore.

In the cat, tapping of the floor of the mouth externally, just superior to the hyoid

¹ Hitchcock Fellow in Gross Anatomy, 1932-1933.

bone, or irritation of the pharynx with a cotton swab invariably elicit a marked inspiratory response. The application of 1 per cent cocaine solution to the pharynx abolishes this response. A preliminary report on the nervous pathways involved was made. Further work is being done in an effort to elucidate the finer details of the sensory nerves involved.

The Fifty-fourth Program Meeting of the University of Maryland Biological Society was held, Tuesday, December 19, 1933, at 8.15 P.M. in the Chemical Amphitheatre of the University of Maryland Medical School. Dr. John C. Krantz, Jr., the President, presided over the meeting. Below are abstracts of the papers presented before the Society:

A Dye Analytical Method of Investigating Metamorphic and Metabolic Reactions in Amphibia. By F. H. J. FIGGE, Department of Gross Anatomy, School of Medicine, University of Maryland.

The effect of some of the many dyes and substances that were tried on salamander larvae are as follows: 1. Immersion in very weak solutions (1:2,000,000-1:100,000,000) of three dyes of the basic tri-phenol methane series were found to produce changes in *A. trigrinum* larvae that resemble some of the normal metamorphic reactions. Crystal violet reduced the gill filaments most rapidly; brilliant green acted likewise and in addition, produced skin shedding in large pieces; and malachite green had the same action but seemed least toxic.

2. In addition to the above changes, the adult vascular network appears in the skin, the fins are reduced, the animals become exophthalmic. The visceral arches are not reduced, however, nor does the gular fold fuse, since all the animals died in the gill-stub stage.

3. Injection of the dyes does not seem to produce the same effect, though this has not been adequately tested.

4. Crystal violet induces a state of extreme inactivity in the thyroid gland.

5. It was noticed that the solutions of the active dyes were decolorized more rapidly than those that were inactive.

6. The tissues of animals treated by immersion in crystal violet were not stained except the epidermal layers and this disappeared shortly after the treatment was stopped. Tissues of animals in methylene blue were not stained, but the dye was present in the leuco form. The tissues of animals treated with neutral red were all deeply stained.

7. On examination of animals immersed in crystal violet solution, the blood in both arteries and veins was found to be bright red.

The activity of the dye may be related to the oxidation-reduction potential of the dye.

The Bilateral Vagus Innervation of the Suprarenal Glands. By HARRY A. TEITELBAUM, Fellow in Gross Anatomy, Department of Anatomy, School of Medicine, University of Maryland.

On the basis of the Marchi technique for degenerated myelinated nerve fibers the presence of crossed vagus fibers in the superior mediastinum of the cat was verified; as was the interchange of right and left vagus fibers in the anterior and posterior vagus cords respectively.

The innervation of the suprarenal glands by the vagus nerves has been definitely determined; and it is demonstrated that each vagus nerve is distributed to both suprarenal glands, thus adding further evidence to the concept that the vagi are distributed bilaterally in the abdomen.

The Fifty-fifth Program Meeting of the University of Maryland Biological Society was held, Tuesday, January 9, 1934, at 8.15 P.M. in the Chemical Amphitheatre of the University of Maryland Medical School. President John C. Krantz, Jr., presided over the meeting. Dr. Charles W. Metz of the Department of Zoology of Johns Hopkins University and the Carnegie Institute of Washington presented "Studies of the Mechanics of Mitosis."

The Fifty-sixth Program Meeting of the University of Maryland Biological Society was held Tuesday, February 6, 1934, at 8.15 P.M. in the School of Pharmacy Lecture Room, University of Maryland. Dr. John C. Krantz, Jr., presided. Below are abstracts of the papers presented before the Society:

A Comparative Study of the Maryland Sennas with the Official Sennas. By FRANK J. SLAMA, Departments of Botany and Pharmacognosy, School of Pharmacy, University of Maryland.

A comparative study was made of the official sennas, Cassia Senna and *C. angustifolia* and the four Maryland sennas—*C. Marilandica*, *C. Medsgeri*, *C. nictitans* and *C. Chamaecrista*. The stomata, neighboring cells, epidermal cells and the distribution of epidermal hairs of the upper and lower surfaces of the leaflets were compared. A study was also made of the margins, apices, petiolules, glands on the petioles and the cross section of the leaflets. From the differences noted, the sennas were separated into three groups: Group I, the official sennas, Group II, *C. Marilandica* and *C. Medsgeri*, and Group III, *C. nictitans* and *C. Chamaecrista*.

The Hormonal Influence upon the Descent of the Testicle. By H. S. RUBINSTEIN, B.S., M.D., Neuro-Anatomical Laboratory of the Department of Anatomy School of Medicine, University of Maryland.

A human male 10½ years of age with dystrophia adiposogenitalis and bilaterally (intra-abdominal) undescended testes was treated with the water soluble fraction of pregnancy urine and the results obtained in this case were checked as far as possible by experimentation with white rats. It was found in the human that the testes descended, scrotum became enlarged, behavioral changes tended more toward the masculine and improvement in mental status as determined by Binet-Simon tests occurred. Experimental confirmation on rats disclosed that the six rats treated with the same hormone possessed testes, penes, and pituitary glands which averaged respectively 0.178 gm., 0.034 gm., and 0.0026 gm. heavier than the corresponding organs of their controls. In addition testicular descent in the test rats regardless of their ages, occurred within 3 to 5 days after the beginning of treatment while in the control animals, descent occurred between 40 and 50 days of age. Although the seminal vesicles were enlarged, no spermatozoa were obtainable.

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The names listed above are officers for the term beginning July 1, 1934, and ending June 30, 1935.

SPRING ACTIVITIES

The Spring Activities held on May 31 and June 2, 1934, are now a memory. The graduation exercises were held as during the past few years at the Ritchie Coliseum, College Park. The Medical School celebrated its One Hundred and Twenty-Seventh Anniversary. In times like these, the attendance was extremely gratifying to those in charge of arrangements.

The program included a complimentary luncheon in the nurses' dining hall of the new University Hospital. This was an auspicious occasion inasmuch as it was the first formal use of this building. After the luncheon, the alumni convened in Chemical Hall for the Annual Meeting of the Alumni Association, and to listen to dry clinics by Dr. Arthur H. Hawkins, P. & S., class of 1895, a distinguished surgeon of Cumberland, Md. and to Dr. Fred H. Heise, class of 1907, well and favorably known as an authority on tuberculosis, and a member of the staff of Trudeau Sanatorium, Saranac Lake, N. Y.

An intermission was then declared until 7 p.m., at which time over 300 alumni foregathered at the Lord Baltimore Hotel for the annual dinner. President R. A. Pearson, His Excellency, the Honorable Albert C. Ritchie, Governor of Maryland, The Honorable Howard W. Jackson, Mayor of Baltimore City, George M. Shriver, Chairman of

the Board of Regents, The Honorable Millard E. Tydings, Member of the United States Senate, Dr. E. Starr Judd, Professor of Surgery, University of Minnesota, The Honorable William P. Cole, Jr., Member of the House of Representatives, Dr. Randolph Winslow, Emeritus Professor of Surgery, Dr. Leonard E. Neale, Emeritus Professor of Obstetrics and the class of 1934 were the guests of honor. This concluded the exercises of May 31st.

June 2nd, a number of the alumni visited College Park. The day's program was as follows: 10 a.m., inspection of the grounds and buildings; 1.15 p.m., luncheon; 3.30 p.m., commencement exercises, Ritchie Coliseum, presentation of honorary degree to Dr. E. Starr Judd, Mayo Clinic, Rochester, Minn. The graduates were addressed by His Excellency, Albert C. Ritchie, Governor of Maryland, and President Raymond A. Pearson.

The Board of Regents, the President of the University, the Faculty of Physic, the Board of Directors and Officers of the Medical Alumni Association wish to express through the Bulletin their deepest appreciation to the visiting alumni for their enthusiastic support. The interest and loyalty manifested by the alumni were a source of satisfaction to the committee in charge of arrangements.

The following alumni registered during this year's activities:

Drs. Louis H. Douglass, Baltimore, Md. Harvey G. Beck, Baltimore, Md. Wm. M. Carmine, Dundalk, Md. J. G. Runkel, Catonsville, Md. M. A. Novey, Baltimore, Md. Morris L. Yubas, Philadelphia, Pa. J. K. B. E. Seegar, Baltimore, Md. Wm. H. Pearce, Baltimore, Md. Frank K. Morris, Baltimore, Md. Margaret Ballard, Baltimore, Md. J. M. H. Rowland, Baltimore, Md. H. J. Maldeis, Baltimore, Md. Chas. R. Foutz, Westminster, Md. E. C. Reitzel, Baltimore, Md. James W. Meade, Fishing Creek, Md. Hugh R. Spencer, Baltimore, Md. C. G. Warner, Baltimore, Md. L. S. Heck, Mt. Kisco, N. Y. T. R. O'Rourke, Baltimore, Md. Chas. W. Hartwig, Reisterstown, Md. John F. Hogan, Baltimore, Md. Marius P. Johnson, Baltimore, Md. J. H. Mitnick, Baltimore, Md. John Robertson, Onancock, Va. Chas. C. Habliston, Baltimore, Md. A. H. Finkelstein, Baltimore, Md. Wm. N. McFaul, Jr., Baltimore, Md. C. A. Reifschneider, Baltimore, Md. Page Edmunds, Baltimore, Md. W. L. Howard, Baltimore, Md. Robert V. Palmer, Avenue, Md. J. Henry Orff, Reading, Pa. C. R. Edwards, Baltimore, Md. W. G. Queen, Baltimore, Md. J. G. Moore, Baltimore, Md. Edw. R. Gookin, Washington, D. C. J. E. Brumback, Baltimore, Md. S. H. Long, Chattanooga, Tenn. C. Victor Richards, Baltimore, Md. John Evans, Baltimore, Md. William Tarun, Baltimore, Md. A. H. Hawkins, Cumberland, Md. W. Duncan Owens, Miami Beach, Fla. A. N. Mellott, Ambridge, Pa. Raymond L. Johnson, Waycross, Ga. John H. Bennett, York, Pa. H. B. McDonnell, College Park, Md. Fred H. Heise, Trudeau, N. Y. Compton Riely, Baltimore, Md. L. D. Phillips, Marshallton, Del. W. H. Marsh, Solomons, Md. J. Herbert Wilkerson, Baltimore, Md. Edgar B. Friedenwald, Baltimore, Md. H. E. Gillett, Ramsey, N. J. Henry J. Walton, Baltimore, Md. Claude M. Sneden, Long Beach,

Calif. W. E. Byers, Baltimore, Md. Morris I. Schlindlinger, Baltimore, Md. K. B. Boyd, Baltimore, Md. N. Winslow, Baltimore, Md. W. F. Gemmill, York, Pa. John R. Oliver, Baltimore, Md. C. B. Korns, Sipesville, Pa. C. E. Imbrie, Butler, Pa. M. J. Coffey, Newark, N. J. R. G. Willse, Baltimore, Md. John W. Hodges, Hampton, Va. A. W. Reier, Dundalk, Md. A. C. Walkup, St. Augustine, Fla. C. F. Strosnider, Goldsboro, N. C. I. N. King, Prince Frederick, Md. H. S. Rubinstein, Baltimore, Md. H. E. Peterman, Baltimore. C. R. Ball, Philadelphia, Pa. Leo T. Brown, Washington, D. C. W. J. B. Orr, Washington, D. C. J. Morley Hoag, Baltimore, Md. Harry M. Robinson, Baltimore, Md. Wm. H. Hahn, Friendship, Maine. Alfred T. Gundry, Catonsville, Md. T. B. Aycock, Baltimore, Md. F. D. Fortney, Newbury, W. Va. and M. H. Greifinger, Newark, N. J.

WE ARE ON OUR WAY

The University Hospital is conducting a campaign for \$170,000 to equip the new building and to recondition the old one for the outpatient departments.

The new building properly equipped, and the reconditioned old building are absolutely necessary if the University is to keep pace with modern trends in medical education.

We are, therefore, appealing to you as an alumnus to make a contribution to this fund. Any amount you can spare will be helpful and needless to say much appreciated.

Please let us hear from you at your earliest convenience as we are anxious to complete the fund as soon as possible. If you cannot spare the money now, you can pay in quarterly instalments or any other way you may elect during the present fiscal year.

Make checks payable to the Treasurer, University Hospital Campaign Fund, Lombard and Greene Sts., Baltimore, Md.

ITEMS

Under date of May 26, 1934, Dr. Charles E. Gill, of Boston, Mass., class of 1927, writes: I have been thinking that the University Hospital with its long and faithful record as a teaching hospital, should maintain closer contact with the many young men who have spent their hospital years there. Now that a greater and larger University Hospital is about to be opened, I feel that a House Officers' Association might be organized as a part of the alumni organization. Such a group would have much in common, including for the most part the same medical parentage and might meet at the University Hospital preferably on the occasion of the annual get-together. Such a group would permit of a sustained relationship between the hospital and its shifting medical personnel. Further it would provide one more inducement for attendance at the annual alumni meeting. Such men as yourself, Dr. Pincoffs, Dr. Lynn and several others, will be interested enough to do something about it.

Many thanks to you for the personal appeal on behalf of the University Hospital.

The BULLETIN is indebted to Dr. Gill for the following items:

Underwood, Dr. David G., B. M. C., class of 1894, engaged in general practice and chairman of local board of health, at Main and High Streets, Hingham, Massachusetts.

Harris, Dr. Charles E., B. M. C., class of 1897, engaged in general practice in Hyannis, Massachusetts.

Miner, Dr. Harold E., class of 1905, district health officer of the Massachusetts Department of Public Health, with Offices at 145 State Street, Springfield, Massachusetts.

Blanchard, Dr. William L., class of 1914, practise limited to eye, ear, nose and throat at 247 Concord Street, Framingham, Massachusetts, and visiting physician, at Boston Dispensary, Boston, Massachusetts.

Gorman, Dr. John J., P. & S., class of 1908, full-time roentgenologist to the Fall River General Hospital, Fall River, Massachusetts.

Reynolds, Dr. John T., B. M. C., class of 1905, practices surgery and resides on Furnace Brook Parkway, Quincy, Massachusetts; he is attending surgeon on the staff of the Quincy City Hospital.

Hannigan, Dr. Roscoe S., class of 1916, engaged in general medical practice at 20 Wollaston Avenue, Quincy, Massachusetts; visiting surgeon to the Quincy City Hospital.

Dr. J. LeRoy Wright, Baltimore, Md., B. M. C., class of 1908, has been appointed warden of the House of Correction, Jessups, Md. For the last three years Dr. Wright has been physician in charge at the institution and prior to that visiting physician to the Maryland Train-

ing Schools for Boys, Loch Raven, Md. A native of Baltimore, the new warden received his education in the public schools.

Dr. Cyrus Flook Horine, Baltimore, Md., class of 1919, is recovering from an operation for empyema consecutive to pneumonia. He is a patient in the University of Maryland Hospital.

Dr. Charles Loring Joslin, Baltimore, Md., class of 1912, read a paper, on Vitamin B in Disturbances of Nutrition in Children, March 27, 1934, before the staff of the West Baltimore General Hospital.

Dr. Herman Seidel, Baltimore, Md., P & S., class of 1910, is chairman of the visiting staff, West Baltimore General Hospital.

At the regular monthly meeting of the University of Maryland Hospital Staff held March 19, 1934, the following programme was presented:

1. Progressive Muscular Dystrophy.....Dr. A. F. Voshell
2. Myasthenia Gravis.....Dr. J. G. Arnold
3. Stab Wound of Spine, Report of a Case.....Dr. R. Coblentz

Dr. Leon Freedom, Baltimore, Md., class of 1921, read a paper, before the Baltimore County Medical Association, April 18, 1934, entitled "An Interesting case of Neurological Findings with Chronic Lymphatic Leukemia."

At the annual meeting of the Medical and Chirurgical Faculty of the State of Maryland, held April 24, 1934, the following alumni were elected to office for the ensuing year:

Vice-President: Dr. James McFaddin Dick, Salisbury, Md., class of 1895.

Secretary: Dr. Walter Dent Wise, Baltimore, Md., P. & S., class of 1906.

Treasurer: Dr. Charles Emil Brack, Baltimore, Md., P. & S., class of 1895.

Councillors:

Dr. Randolph Winslow, Baltimore, Md., class of 1873.

Dr. Robert Lee Hall, Pocomoke, Md., class of 1901.

Alternate Delegate to the American Medical Association: Dr. Charles French Blake, Baltimore, Md., P. & S., class of 1893.

Delegate American Medical Association: Dr. Henry Maynadier Fitzhugh, Westminster, Md., class of 1897, to fill term of Dr. Alexius McGlannan, Baltimore, Md., P. & S., class of 1895.

Committee on Scientific Work and Arrangements:

Dr. Thomas Keough Galvin, Baltimore, Md., P. & S., class of 1915.

Dr. Harry Michael Stein, Baltimore, Md., class of 1914.

Library Committee: Dr. John Ruhräh, Baltimore, Md., P. & S., class of 1894.

Finney Fund Committee:

Dr. Harry Friedenwald, Baltimore, Md., P. & S., class of 1886.

Dr. A. F. Voshell, Baltimore, Md., Professor of Orthopedic Surgery, to fill term of Dr. Alexius McGlannan, Baltimore, Md., P. & S., class of 1895.

State Board of Medical Examiners:

Henry M. Fitzhugh, Westminster, Md., class of 1897.

Dr. John T. O'Mara, Baltimore, Md., class of 1903.

Dr. Earle Paul Knotts, Denton, Md., class of 1920, to fill the unexpired term of the late Dr. Eldridge Eakin Wolf, Cambridge, Md., class of 1899.

Nominating Committee:

Dr. Waitman F. Zinn, Baltimore, Md., P. & S., class of 1911.

Dr. John William Pierson, Baltimore, Md., class of 1905.

Dr. Maurice Pincoffs, Baltimore, Md., Professor of Medicine.

Dr. Robert W. Barton, San Angelo, Tex., P. & S., class of 1884, recently celebrated the 50th anniversary of his graduation in medicine. He interned at Mercy Hospital, then known as City Hospital. The late Dr. John S. Lynch was his preceptor. Dr. Barton will be pleased to hear from any of his class-mates to whom he sends through the BULLETIN greetings. Dr. Barton writes that the letter is sent us as an expression of his appreciation to his teachers in Baltimore.

Dr. J. V. McAninch, Brownsville, Pa., P. & S., class of 1914, and family spent the months of February and March, in Florida.

Dr. H. S. Rubinstein, Baltimore, Md., class of 1928, has been elected a member of the American Association of Anatomists.

Frank Figge, Ph.D., Baltimore, Md., instructor in anatomy, has been elected to membership in the American Association of Anatomists.

Dr. G. Dent Townshend, Kansas City, Mo., class of 1911, announces the change of his office to suite 700 Argyle Building, Twelfth and McGee Sts.

The Library is indebted to Dr. J. M. Silverstein, Milburn, N. J., class of 1925, for the following gift of books. The library committee takes this opportunity to thank Dr. Silverstein for this most generous and valuable donation.

Lee, James: *On Introduction to Botany*. London, J. F. and C. Rivington, L. Davis, B. White and Sons, 1788.

Foster M.: *A Text-Book of Physiology*. Philadelphia, Henry C. Lea's Son & Co., 1881.

Eberle, John: *A Treatise on the Practice of Medicine*, Vol. II. Philadelphia, Grigg & Elliot, 1835.

Richerand, A., and De Lys, G. J. M.: *Elements of Physiology*. Philadelphia Thomas Dobson, 1813.

The Medical News and Library. Philadelphia, Lea and Blanchard, 1843.

Ricord, Ph., and Doane, Sidney A.: *A Practical Treatise on Venereal Diseases*. New York, J. S. Redfield, 1849.

Chalmers, Thomas: *The Works of Thomas Chalmers*, Vol. I. Bridgeport, M. Sherman, 1829.

Thomas, Robert: *The Modern Practice of Physics*. New York, Collins and Co.

Velpeau, Alf. A. L. M.: *New Elements of Operative Surgery*. New York, Samuel S. & William Wood, Vol. I, 1853.

- Bielt, D.: A Practical Synopsis of Cutaneous Diseases. Philadelphia, Corey and Lea, 1832.
- Homer, William E.: A Treatise on Special and General Anatomy. Philadelphia, Corey, Lea & Blanchard, Vol. I.
- Murray, John: A System of Materia Medica and Pharmacv. New York, Collins & Hannay and J. B. Collins, 1834.
- Eberle, John: A Treatise on the Practice of Medicine. Philadelphia, Grigg and Elliot, Vol. I, 1835.
- Mackenzie, William: A Practical Treatise on the Diseases of the Eye. Boston, Carter, Hendee and and Co., 1833.
- Cooper, Samuel: A Dictionary of Practical Surgery. New York, Collins & Hannay, 1823.
- Gibson, William: The Institutes and Practice of Surgery. Philadelphia, Corey, Lea & Blanchard, Vol. I, 1838.
- Gibson, William: The Institutes and Practice of Surgery. Philadelphia, Corey, Lea & Blanchard, Vol. II, 1838.
- Velpeau, Alf. A. L. M.: New Elements of Operative Surgery. New York, Samuel S. & William Wood, Vol. II, 1853.
- Dunglison, Robley: On Human Health, Constituting Elements of Hygiene. Philadelphia, Corey, Lea & Blanchard, 1835.
- Brodie, Benjamin C.: Clinical Lectures on Surgery. Philadelphia, Lea and Blanchard, 1846.
- Cooper, Thomas: Tracts on Medical Jurisprudence. Philadelphia, James Webster, 1819.
- The Panoplist, and Missionary Magazine: Samuel T. Armstrong, 1815.
- Coxe, John Redman: The American Dispensatory, Philadelphia, Corey and Lea, 1830.
- Wood, George B., and Bache, Franklin: The Dispensatory of the United States of America. Philadelphia, Lippincott, Grambo & Co., 1854.
- Hooper, Robert: Lexicon Medicuni or Medical Dictionary. New York, Harper & Brothers, 1839.
- Dunglison, Robert: A Dictionary of Medical Science. Philadelphia, Henry C. Lea, 1866.
- Pons, J. A., and Beck, John B.: Pharmacologia. New York, W. E. Deon, 1831.

Among the names in the list of those graduated from the several schools of the University of Maryland at its recent commencement, was that of Dr. H. S. Rubinstein, Baltimore, Md., class of 1928, who was awarded the degree of Ph.D. As far as we are aware, this is the first time that a graduate of the medical school has obtained a doctorate in philosophy from the University. Dr. Rubinstein is to be congratulated upon the successful completion of a difficult task and one made doubly so in his case by the fact that he accomplished his purpose while actively engaged in the onerous duties devolving upon a teacher and a practitioner of medicine. Herewith we present in chronological order the main events in Dr. Rubinstein's life:

Born, March 16, 1904, in Leeds, England.

Parents migrated to United States, when he was 6 months of age.

Education:

Elementary Schools of Baltimore;
Graduated from Baltimore City College in 1922;
Ph.G., School of Pharmacy, University of Maryland, 1924;
M.D., School of Medicine, University of Maryland, 1928;
B.S. in Pharmacy, School of Pharmacy, University of Maryland, 1932;
Ph.D., Graduate School, University of Maryland, College Park, Md., 1934.
Interned at Sinai Hospital, Baltimore, Md., during his senior year as medical student and during 1928-1929.
Married Miss Ellen Steinhorn of Baltimore, Md., July 22, 1929 and entered the practice of medicine in Baltimore. Has one child, Madelyn, born, August 21, 1932.
Became associated with Dr. Carl Davis' anatomical laboratory in 1929, studying histology and then neuro-anatomy.
Appointed instructor in anatomy, 1930 and registered as a graduate student in the medical school.
Took summer courses in comparative anatomy and embryology and night courses in mathematics at the Johns Hopkins University for which credit was given towards a B.S. in pharmacy.
Received certificate from School of Medicine, 1933, for post-graduate course in medicine.
Entered as a graduate student in the Graduate School, College Park, Md., working in neuroanatomy and endocrinology.
Was granted a part-time fellowship (Weaver Fellow) during past 2 years.
Thesis dealt with "The Growth Function of the Pituitary Gland: Its Effect upon the Brain and Brain Weight-Body Weight Relations."

He is a member of the following societies:

1. Baltimore City Medical Society;
2. Medical and Chirurgical Faculty of the State of Maryland;
3. Fellow of the American Medical Association;
4. University of Maryland Biological Society;
5. Association for Research of Nervous and Mental Diseases;
6. Association for the Study of Internal Secretions;
7. American Association of Anatomists.

Dr. G. Kirby Collier, class of 1900 P. & S. announces the removal of his office to the Hiram Sibley Building, 311 Alexander Street Cor. of East Ave., Rochester, N. Y. Dr. Collier limits his practice to Neuro-psychiatry.

The University of Maryland Medical Alumni Association of the State of New York held its annual reunion and banquet at the Fort Schuyler Club, Utica, N. Y., May 16, 1934, in conjunction with the 128 annual meeting of the State Medical Society. Among the speakers was Dr. J. M. H. Rowland, dean of the Medical School, University of Maryland. The membership of the New York Alumni Association

totals 344, including 344 upstate and 160 in New York City. Dr. H. J. Haberer, Utica, is secretary of the association and Dr. L. G. Taylor, Hudson, is president. Other officers include Drs. A. R. Morse, Norwich, vice-president and H. E. Wangler, Syracuse, treasurer.

MASTER SURGEONS OF AMERICA



WILLIAM GIBSON, M.D.

The following interesting account of Dr. William Gibson, written by Dr. John C. A. Gerster, appeared in *Surgery, Gynecology and Obstetrics*, 1931, lii, 122.

A great teacher and a great surgeon was William Gibson. He was born in Baltimore, in 1788, and as his parents were well to do they were able to give him every educational advantage. As a youth he attended Annapolis College (this is a mistake, it should be St. John's College, Annapolis, which institution from 1907 to 1920, was affiliated with the University of Maryland, as its department of arts and sciences, (Historical Sketch of the University of Maryland, School of Medicine, Friedenwald press, 1891, page 38) and later he entered the sophomore class at Princeton.

In the winter of 1806-1807 he attended the surgical lectures of Professor Physick in Philadelphia. Like other men of attainment, he early appreciated his own latent capacity. One day after Physick's lecture he seemed abstracted and thoughtful, and when questioned by his fellow students answered that he expected some time to succeed the great Physick. Thirteen years later this actually happened.

When the Physick lectures were concluded, Gibson sailed for Europe and entered the University of Edinburgh. His graduation thesis in Latin, "*De Forma Ossium Genitilitae*," evoked favorable comment. Soon after he visited London and became a member of the household of Sir Charles Bell, for whom he conceived a profound admiration. He considered Astley Cooper great, but Bell even greater. Indeed, one of his sons was named Charles Bell and he subsequently became a distinguished surgeon. While in London, Gibson had the opportunity of seeing many of the wounded after the battle of Corunna. Some of his biographers state that receiving news of the impending battle he managed through influential friends to board a British transport and was present during the engagement.

In 1810 he returned to Baltimore. In 1811 he married for the first time, and by this marriage had five children, three sons and two daughters. By a second marriage he had two more daughters.

In 1812, during the riot in Baltimore, he saw a man fall from a gunshot wound in the groin. There was a profuse hemorrhage which Gibson checked by digital compression. He then immediately obtained assistance, exposed and tied the common iliac artery, found that the distal end of the torn artery also bled, and closed two holes in the intestine. The wound was then held together with adhesive plaster, but the patient succumbed to peritonitis on the fifteenth day, from intestinal leakage. The lower extremity remained viable. This was the first demonstration of the establishment of collateral circulation of the lower extremity after ligation of the common iliac.

The same year Gibson operated on General Winfield Scott, who had been wounded at the battle of Lundy's Lane, near Niagara. Upon the removal of the embedded bullet the persistent sinus in the leg healed.

About this time Gibson organized the medical department of the University of Maryland, and became the first professor of surgery in this school. (This statement is also erroneous. According to Winslow, R., *Hospital Bulletin*, University of Maryland, 1909, v, 121, "The charter of the founding of the College of Medicine of Maryland was granted by the Legislature on December 18, 1807. In the sixteenth section of this charter it is enacted that John B. Davidge, M.D., and James Cocke, M.D., shall be joint professors of anatomy, surgery and physiology (Cordell, E. F., *University of Maryland, 1807-1907*, New York, Lewis Publishing Co., 1907, i, 14). In

the division of this work Dr. Davidge delivered the lectures on surgery until 1812, when Dr. William Gibson was elected professor of surgery and held the chair until 1819." (Dr. Gibson's name is not mentioned among the founders and he was the second incumbent of the chair of surgery in the University of Maryland.) In September, 1819, however, he was appointed to the chair of surgery at the University of Pennsylvania, which he occupied for thirty-six years. At this time his old friend Professor Physick, who because of ill-health had retired five years before after occupying the chair of surgery for twenty-seven years, was recalled to the chair of anatomy.

In 1824, Gibson's textbook, *The Principles of Surgery*, dedicated to Physick, made its first appearance. It was the standard work of its time and eventually ran through eight editions.

Gibson was the first to introduce systematic clinical instruction, always stressing the principles of his work. One of his biographers says: "He had a chaste, offhand style of lecturing. . . . If the eyes were shut it was like reading a book." He successfully performed a cesarean operation twice on the same patient with complete recovery (1835-1837).

In 1811 he devised linear extraction of cataract. In 1818 he operated for strabismus, twenty-one years before Dieffenbach. He was the first to perform suprapubic lithotomy. He devised a circular saw actuated by clockwork, for the cutting of bones. He had the courage to report two cases of rupture of the axillary artery following attempted reduction of dislocated shoulders.

In the summer of 1839 Gibson again visited Europe and in 1841 this visit was described in a book of 390 pages, *Rambles in Europe in 1839*. This is a charming work with faithful descriptions of the great medical centers in London, Paris, Edinburgh, and Dublin. It is remarkable to note how little the essential spirit of these great centers has changed since that time. The notables of the period live and move across the scene as one reads the book.

Gibson's amusements were hunting, taxidermy, fishing, and carpentry. He was very fond of music and played the violin. For over sixty years he faithfully kept a journal, which reached the imposing number of 150 volumes. His accuracy was so well known that occasionally he and his journal were called upon to determine the exact date of some occurrence or the state of the weather on a certain day.

He was a man of strong character and equally strong prejudices. He was violently opposed to the use of tobacco and was once vice-president of the Anti-Tobacco Society of London. He repeatedly stated that he had added twenty years to his life by not smoking. He was an excellent observer and correctly stated that men got along more by tact than by talent. But he was not amiable. As an example, it is related that after twice warning a noisy

young son at the table to be quiet, he finally impaled the child's foot to the floor with the carving fork, remarking, "Now, will you be still?"

He was somewhat vain and on his return from his "Rambles in Europe" appeared before his class in a loud suit of shepherd's plaid, which occasioned much cheering from the students. This he took as personal acclaim, though it was really intended for his startling garb.

He was passionately fond of fishing. Indeed, it was while on one of his fishing trips, in his eightieth year, that he died, from what may be supposed to have been senile gangrene of the foot.

Years before, while on a fishing trip accompanied by a lawyer friend, he had an altercation with another man over a boat, and beat him up severely. His friend, the lawyer, defended him in the ensuing action brought against him and to Gibson's surprise rendered a bill for legal services, which was paid without comment. Shortly after another fishing trip was undertaken with the same legal companion, and as the result of some tartar emetic shyly added to the luncheon the lawyer became violently sick. He was attended by his medical friend, who then rendered his bill for an amount identical with that which had been charged by the lawyer.

William Gibson was one of the great figures of his time—a talented, energetic surgeon of great capacity, sound judgment, and clear vision. His literary ability was considerable. His qualities of intellectual honesty and energy greatly overbalanced any irascibility which he sometimes displayed.

Note: It is both gratifying and pleasant to have one of our former professors spoken of so highly and complementarily. The professors of surgery in the University of Maryland have always loomed large in the profession and have been, without exception, a credit to the school.

DEATHS

- DR. HENRY DIXON STEWART, Monroe, N. C., class of 1898; served during the World War; aged 62; was found dead in bed, March 20, 1934, of cardiac disease.
- DR. EDGAR BENTLEY NOLAND, Bassetts, Va.; P. & S., class of 1910; served during the World War; aged 44; died, March 2, 1934, of angina pectoris.
- DR. WILLIAM EDWARDS, Spring Hope, N. C.; P. & S., class of 1884; aged 69; died, February 14, 1934, of cerebral hemorrhage and arteriosclerosis.
- DR. WILLIAM W. BUCK, Rural Retreat, Va.; P. & S., class of 1885; aged 77; died, March 25, 1934, of cardiac disease and nephritis.
- DR. PETER E. WILKIN, Colquitt, Ga.; P. & S., class of 1890; formerly mayor of Colquitt and member of the state legislature; aged 67; died, February 27, 1934, of endocarditis.
- DR. OAKLEY STITT GRIBBLE, Clarksburg, W. Va.; class of 1904; served during the World War as a captain in the Medical Corps of the United States Army; formerly superintendent of Mason Hospital; aged 57; died, April 3, 1934, of carcinoma of the prostate gland.
- DR. JAMES S. KOONTZ, Johnstown, Pa.; P. & S., class of 1891; aged 75; died, January 15, 1934.
- DR. RICHARD BENSON STEWART, Warren, Pa.; P. & S., class of 1881; aged 72; died, March 25, 1934, of pneumonia.
- DR. JOHN RICHARD BENTON, Stevensville, Md.; class of 1883; for 20 years member of the county board of education and for 12 years judge of the orphans' court; aged 75; died, March 19, 1934, of chronic nephritis and cardiac disease.
- DR. GEORGE WILLIAM LEWIS, Wilson, N. C.; class of 1886; aged 70; died, February 16, 1934, of arteriosclerosis.
- DR. OTIS DEE MCCOY, Wheeling, W. Va.; P. & S., class of 1904; aged 56; died, March 13, 1934, of pneumonia.
- DR. WILLIAM GIBSON BLACK, Nashville, Tenn.; P. & S., class of 1883; aged 76; died, March 26, 1934, of thrombosis.
- DR. BEN RUSSELL, Sheffield, Ill., P. & S., class of 1896; aged 70; died, March 14, 1934, of acute cardiac dilatation.
- DR. JOHN LEDBETTER, Eatonton, Ga.; P. & S., class of 1886; aged 78; died, February 3, 1934.
- DR. ALBERT DOLLY EDWARDS, Walkertown, N. C.; class of 1903; aged 56; died, February 15, 1934, of pneumonia. Dr. Edwards was born at Elk Creek, in Alleghany county, N. C., on August 11, 1877. He was a son of D. C. and Martha Reeves Edwards. He received his preliminary education in the schools of Winston-Salem, N. C. Before coming to the University of Maryland, he was a student in the Medical School of the University of North Carolina. Dr. Edwards practised his profession for seven years at North Wilkesboro, N. C. and at Roanoke, Va. In 1914, he returned to Winston-Salem where he engaged in practice until 1926 when he moved to Walkertown. He held a physician's licence in North Carolina, Virginia, Maryland and West Virginia. Dr. Arthur J. Edwards, Bristol, Va.; class of 1899; is a brother.
- DR. JOSEPH C. WILSON, Titusville, Pa.; class of 1884; aged 80; died, April 16, 1934, of pneumonia superinduced by a fracture of the hip. On April 18th, his wife, Rachel H. Wilson died of hemiplegia. Double funeral services were held on April 19, 1934.
- DR. OSCAR O. BLAKESLEE, Conneaut, Ohio; P. & S., class of 1882; city health officer; aged 80; died, February 28, 1934, of pneumonia.
- DR. BASIL DENNIS SPALDING, Richmond, Va.; class of 1891; aged 70; died, February 17, 1934, of myocarditis.
- DR. ALGERNON WINSTON WALDEN, Owingsville, Ky.; P. & S., class of 1883; formerly a member of the state board of health; aged 77; died, February 28, 1934, of cerebral hemorrhage.
- DR. ROLFE ELDRIDGE HUGHES, Laurens, S. C.; class of 1892; past president of the South Carolina Medical Association; past president and for many years secretary of the Tri-State Medical Association of the Carolinas and Virginia; past president of the Laurens County Medical Society; aged 65; died, December 2, 1933.

- DR. WILLIAM CLIFTON BLACK, Greenville, S. C.; class of 1886; fellow of the American College of Surgeons; aged 73; died, December 12, 1933, of cirrhosis of the liver.
- DR. JEFFERSON G. MCKINNEY, Plattsburg, N. Y.; P. & S., class of 1886; aged 73; died, January 27, 1934.
- DR. JAMES EDDY MONTGOMERY, Los Angeles, Calif.; P. & S., class of 1886; aged 70; died, November 2, 1933, of carcinoma.
- DR. JAMES BATES BENNETT, Baltimore, Md.; B. M. C., class of 1889; aged 65; died, January 21, 1934, of lobar pneumonia and chronic arthritis.
- DR. HENRY WEITZELL WANDLESS, New York, N. Y.; P. & S., class of 1885; at one time clinical professor of ophthalmology, University and Bellevue Hospital Medical College; served during the World War; died, February 17, 1934, of cancer of the stomach.
- DR. S. B. W. COURTNEY, Lake City, S. C.; B. M. C., class of 1902; aged 58; died, February 12, 1934, of coronary thrombosis.
- DR. CHARLES B. CHIDESTER, Erie, Pa.; P. & S., class of 1881; aged 75; died, February 10, 1934, of pneumonia.
- DR. RICHARD ELLIOTT LEE, Lincolnton, N. C.; class of 1896; veteran of the Spanish-American War; aged 60; died, February 15, 1934, of pneumonia.
- DR. JAMES ARCHIBALD NYDEGGER, Baltimore, Md.; Surgeon, U. S. Public Health Service; class of 1892; aged 69; died, February 18, 1934.
- DR. ROBERT GLEN GROSE, Harmony, N. C.; class of 1924; aged 36; died, February 1, 1934, of angina pectoris.
- DR. EDWARD MEEKER BEACH, West Long Branch, N. J.; class of 1885; aged 80; died, February 9, 1934, of acute myocarditis and arteriosclerosis.
- DR. CHARLES LAWRENCE NAY, Jersey City, N. J.; B. M. C., class of 1897; aged 65; died, January 31, 1934, of cerebral hemorrhage.
- DR. FRANK WILLIAM KEATING, Owings Mills, Md.; class of 1896; aged 64; died, February 18, 1934, of acute dilatation of the heart.
- DR. RUSHTON CLARK MOLLOY, Columbus, Miss.; P. & S., class of 1892; aged 64; died, January 7, 1934, of pernicious anemia.
- DR. CHARLES EDWARD CLAYTON, Birmingham, Ky.; P. & S., class of 1884; aged 74; died, January 21, 1934, of pneumonia.
- DR. WILLIAM W. WILKINS, Eastville, Va.; P. & S., class of 1874; aged 86; died, December 16, 1933, of senility.
- DR. WILLIAM J. HUNT, Lake George, N. Y.; P. & S., class of 1891; aged 70; died, January 2, 1934.
- DR. WILLIAM JOSIAH THOMAS, Charleston, W. Va.; P. & S., class of 1892; aged 61; died, December 2, 1933, of angina pectoris.
- DR. WILLIAM JAMES BAIRD, Boulder, Colo.; class of 1881; aged 72; died, February 2, 1934, of pernicious anemia.
- DR. HENRY N. HESS, Fryburg, Pa.; P. & S., class of 1882; bank president; aged 80; died, January 7, 1934, of diabetes mellitus.
- DR. GEORGE MARSHALL WATSON, Manchester, N. H.; B. M. C., class of 1893; served during the World War; formerly member of the school board; aged 65; died, December 13, 1933, of carcinoma of the larynx.
- DR. THOMAS W. BROCKBANK, Philadelphia, Pa.; P. & S., class of 1885; aged 73; died, February 8, 1934, of coronary thrombosis.
- DR. JAMES ALEXANDER ALBRIGHT, Somerville, Tenn.; P. & S., class of 1882; formerly secretary of the state board of health and state senator; aged 73; died, February 2, 1934, of uremia.
- DR. WILMER BRINTON, Baltimore, Md.; class of 1876; formerly professor of obstetrics in the Baltimore Medical College; aged 79; died, February 12, 1934, of chronic endocarditis, arteriosclerosis and diabetes mellitus.
- DR. GEORGE BRIGHT YOUNG, Charlottesville, Va.; class of 1887; senior surgeon, United States Public Health Service; entered the Marine Hospital Service as assistant surgeon in 1890; in 1905 was promoted to surgeon; in 1920 to senior surgeon and in 1924 retired on account of age; during the prevalence of cholera in Europe in 1893, he had charge of the shipment of emigrants and cargoes from various ports; during the yellow fever outbreak in 1897, he had charge of interstate quarantine in portions of Tennessee, Mississippi, Alabama and Arkansas, at which time he established the first extensive system of train inspection; medical officer in charge of the United States Marine Hospital at Chicago, 1905-1908; member of the House of Delegates of the American Medical Association,

- 1908-1911; formerly associate professor of preventive medicine, University of Virginia, Department of Medicine; health commissioner of Chicago, 1911-1915; health officer of Charlottesville, Albemarle and University of Virginia; aged 73; died, February 13, 1934, of hemiplegia.
- DR. DANIEL WEBSTER O'CONNELL, New Britain, Conn.; P. & S., class of 1905; aged 53; died, March 18, 1934, of coronary occlusion.
- DR. RUSSELL DAVENPORT WALTON, Frankfort, Me.; P. & S., class of 1902; served during the World War; aged 57; died, April 1, 1934, of cerebral embolus and mitral stenosis.
- DR. CHENEY ISAAC COLE, Goffstown, N. H.; B. M. C., class of 1896; aged 68; died, February 26, 1934, of hypertension and chronic nephritis.
- DR. VALENTINE J. YORTY, Pittsburgh, Pa.; B. M. C., class of 1906; aged 56; died, April 17, 1934, of fibrosarcoma.
- DR. GARRETT JOSEPH HICKEY, Northampton, Mass.; class of 1893; aged 67; died, April 9, 1934, of cerebral hemorrhage.
- DR. WALTER BENJAMIN KIRK, Darlington, Md.; class of 1893; aged 65; died, February 18, 1934.
- DR. HARRY HOLLISTER BOYNTON, Lisbon, N. H.; B. M. C., class of 1893; aged 64; died, April 23, 1934, of angina pectoris.
- DR. CHARLES FRANKLIN KEYSER, Cuyahoga Falls, Ohio; P. & S., class of 1886; aged 73; died, March 10, 1934.
- DR. CLARENCE HYDE SAUNDERS, Chase City, Va.; P. & S., class of 1891; aged 63; died, March 14, 1934.
- DR. ORVILLE AUGUSTUS RHODES, Salem, Ohio; P. & S., class of 1882; aged 72; died, March 16, 1934, of uremia.
- DR. EDWARD HENRY WOOD, Riverside, Calif.; P. & S., class of 1894; aged 65; died, March 21, 1934.
- DR. GEORGE LEWIS HOWELL, Clarksburg, W. Va.; B. M. C., class of 1896; aged 73; died, April 2, 1934. Dr. Howell was born, November 9, 1860, in Morgantown, the son of Thomas and Susan Sampsell Howell. Educated in Monongalia county, he attended Fairmont Normal School, taught, and then entered the Baltimore Medical College from which he was graduated with honors in 1896. He began the practice of medicine in Worthington and remained there until 5 years ago, when he retired because of ill health. In 1898, he married Luella McIntire, daughter of Lewis and Mary McIntire, by whom he is survived.

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THERAPEUTIC ABORTION

By LOUIS HARRIMAN DOUGLASS, M.D., AND BERNARD W. DONOHUE,
M.D.

BALTIMORE, MD.

Medicine is advancing. New discoveries, new methods, new ideas. A clearer understanding of the many problems with which we have to deal and a saner and more logical outlook on many of the complicated entities known as disease. This is particularly illustrated when we consider that method of treatment known as "therapeutic abortion," at one time a most popular procedure and one frequently resorted to, but now a comparatively rare therapeutic measure. Many of us can easily remember when pregnancy was interrupted on slight provocation, and many conditions which are today being treated perfectly satisfactorily and successfully without abortion, were at one time considered to be absolute indications.

A survey of the records of the University Hospital is most interesting in this connection. We have here a fairly active obstetrical service of our own, where the patients are completely under the supervision of the staff; a fairly large referred service (patients sent to the hospital from various parts of the city and state because of existing pathology), and a small private service, open to staff members. The total of these 3 services for a 10-year period ending September 30, 1933 is 20,739 patients. In this series there were 23 therapeutic abortions, giving an incidence of 1 in 901 cases. The division into the 3 groups mentioned above is most interesting, for in our own service cases, the largest of 3, there were only 6 instances, in the referred cases group, 10, and in the private practice group, much the smallest, there were 7 patients upon whom it was thought advisable to interrupt the pregnancy. This should certainly make one pause and wonder if he is

treating his private patients as well as the free ones, or if perhaps his heart is not ruling his head.

Although our service is largely made up of colored patients (about 80 per cent) only 8 of these are in this series, and 15 white. Again the relatively large number of private cases. Peculiarly, of the 23 cases, only 5 were primiparae, while 18 had had one or more pregnancies prior to the one interrupted. A study of the list of indications helps but little in answering this and the fact remains unexplained.

<i>Indications</i>		<i>Service</i>	<i>Private</i>
Toxic vomiting	10	4	6
Nephritic toxemia	6	6	0
Tuberculosis	2	1	1
Heart disease	2	2	0
Placenta previa	1	1	0
Acute hydramnios	1	1	0
Pyelitis	1	1	0

We find the so called toxic vomiting of pregnancy responsible for 10 instances in which pregnancy is interrupted, but only 4 of these are of the service type of patient, while 6 are from the private group. How many of these were really toxic and how many neurotic? Here a word in defense of the physician is highly in order. Many of our private cases are sent to the hospital by their own physicians who have been treating the vomiting at home for some time. They are told that the reason they are sent in is because interruption is the only thing left that will help them and they enter with this idea firmly fixed in their minds. In these cases suggesting treatment is of little or no value, and we feel compelled at times to abort, to actually save the patient's life, although it is believed that had she been admitted under different circumstances, it would not have been necessary. Indeed, in one instance the patient was anesthetized, her vagina filled with mercurochrome (to simulate lochia), and allowed to awaken. Believing that she had been interrupted, she ceased to vomit and did not begin again until she arrived home some 10 days later. Her husband then told her she was still pregnant, but her anger was so great that it overcame her neurosis and the pregnancy went to term without incident.

Nephritis we always have with us, and this is the one condition in which the interruption of pregnancy need cause the fewest qualms of conscience, for these patients who do offer a definite indication will usually abort anyway, or should the pregnancy be carried to the period of viability, will usually deliver prematurely a puny or dead child.

It is in tuberculosis that we feel there has been the most marked

reduction in the number of therapeutic abortions. Frankly we do not know in just which type of tuberculous patient pregnancy should be allowed to continue and in which type it should be terminated. There is considerable evidence that the interruption of pregnancy helps a very small minority of women with tuberculosis. Bridgeman (1) in 1926 followed 134 cases of tuberculosis complicated by pregnancy, of which number 12 had their pregnancy interrupted. He found that a smaller percentage of these women were living at the end of 2 years, than of those whose pregnancy was undisturbed. Other observers have corroborated these findings, but quite a number have concluded that in selected cases the interruption of pregnancy is of considerable benefit. The consensus of opinion is that only in the first 12 to 14 weeks should therapeutic abortion be done, and that often at this time it is of no benefit. We are constantly asking the advice of the phthisiologist and are largely swayed by his judgment. The procedure is becoming less and less common, however, both in our own clinic and generally.

In heart disease it is our belief that most of these patients can, with proper treatment, go through their pregnancies with very little trouble, but that it is the actual work of labor that does the damage to the heart. We also believe that a term labor or one near to term can be made easier for them than can an abortion; so that except for the most desperate cases, the indication for therapeutic abortion because of heart disease no longer exists.

In our series there was 1 case of placenta previa which bled before the period of viability and on whom abortion was performed. There was 1 case of acute hydramnios in which it was felt that the membranes had to be ruptured because of the large amount of fluid and naturally abortion followed. The baby was a monstrosity (anencephalic) and would not have survived in any event. The last case was one of pyelitis, occurring in a colored girl with a most profound staphylococcic infection which had become general. The abortion was a last minute procedure, but the patient succumbed.

There were in the series 3 maternal deaths, the causes being:

Pyelitis, blood stream infection.....	1
Toxic vomiting of pregnancy with a definite and profound toxemia....	1
Nephritic toxemia-admitted in coma.....	1

In only one of these cases, that of the toxic vomiting, do we feel that the mortality was avoidable, and here it is believed that had the operation been done earlier and by a different method, the result might have been happier.

The method of interruption varies with different cases, but as time

goes on we find ourselves avoiding more and more the classical "dilatation and curettage." In the toxic vomiting, all that is necessary is to destroy fetal life and this can readily be done without anesthetic, using a curved hysterectomy forceps. Very little cervical dilation is needed for the introduction of the instrument into the uterus, since nothing is to be removed. The patient should cease vomiting at once and later will pass the products of conception, unaided in most cases. In the patient with heart disease or tuberculosis a general anesthetic is likewise undesirable and every effort should be made to conserve her strength. What more suitable method could be found than abdominal hysterotomy (a minature cesarean section) under local anesthesia? Many of these patients also present definite indications for sterilization also, and this can be done at the same time. In other cases a simple rupture of the membranes is all that is necessary.

We do not feel that this paper can be closed without a more definite statement on our part as to our attitude regarding therapeutic abortion. While it is perfectly true that in certain cases it is most definitely indicated and a most necessary procedure, it is also just as true that in many more cases it is frightfully abused, and many women have their pregnancies unnecessarily interrupted when they could be carried along very well without it. Many practitioners we fear, in their desire to do all they can to help their patient, overlook the fact that when a therapeutic abortion is done a human life is deliberately destroyed. What difference can it make whether the baby has seen the light of day or not, or whether the lungs have expanded or are collapsed? Our duty as physicians is to do everything in our power to conserve life and not to destroy it. It is not for us to say that one life is more important than another and to sacrifice one that another might be allowed to continue for a few months or a few years longer.

No one should hesitate to interrupt pregnancy in that rather small group of cases in which we are reasonably certain that if the pregnancy be allowed to continue the mother will die and the unborn baby with her. This is not the sacrifice of a life for a life, rather it is an acceptance of the inevitable, and making the best of an unavoidable disaster.

A physician for his own protection, if for no other reason, should not think of doing a therapeutic abortion without consultation with a competent obstetrician, and wherever possible the operation should be done in a reputable hospital. It is only in this way that one may avoid suspicion or criticism.

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PERFORATING SIMPLE ULCER OF THE COLON

By WALTER D. WISE, M.D.

BALTIMORE, MD.

Perforating simple ulcer of the colon is a rare condition but perhaps not so rare as often considered. In the *Annals of Surgery*, June, 1931, I reported two cases and attempted to bring the list of cases and bibliography up to date. Since that report, I have operated upon another case and Dr. Frank Lynn, who kindly allowed me to report his first case, has also had a second, though his first patient has subsequently developed a definite diverticulitis of the sigmoid, thus raising some doubt as to whether the perforation in this case was a simple ulcer only or possibly a perforated diverticulum.

Case 1.—A male, aged 59, referred by Dr. Wetherbee Fort was seen at the Union Memorial Hospital February 1, 1930. He gave a long history of indigestion and recently had been having attacks thought to be biliary colic. He stated that he had taken a saline purgative each morning for many years. The present illness, which seemed an exaggeration of the so called attacks of biliary colic, had begun two days before admission to the Hospital with his symptoms becoming much worse a few hours before I saw him. His temperature was 102.4; W.B.C. 17,200. He was a very stout individual and the right half of the abdomen was very rigid and tender with some tenderness in the right flank. An acute abdominal condition was recognized, the possibility of a perforated gall bladder or an acute pancreatitis being mentioned. At operation, a rather violent peritonitis of the entire right side of the abdomen was revealed. The inflammatory process was limited to the right side by omentum. The severity of the process, with the resulting edema and induration of all structures in a fat abdomen, made it difficult to discover the exact pathological process but the escape of gas led to a perforation of the intestine. Because of the great amount of distention already present, with the extensive peritonitis, and the gangrenous condition around the perforation involving the neighboring fat tags, it was thought best to do an enterostomy and this was done by putting a tube in the perforation, turning it in with several purse-strings and draining this entire area with cigarette drains. The next day, the patient seemed improved but rather rapidly developed a completely silent abdomen and died with symptoms of general peritonitis. An autopsy showed a perforation of a simple ulcer of the hepatic flexure with several small ulcers in this region, each containing an enterolith but this being the only perforation. There was a general distention of the intestinal tract with a diffuse right-sided peritonitis. There were no diverticula of any part of the intestinal tract.

Case 2.—Female, married, aged 33, was seen about 9 p.m., June 24, 1931 at her home with her family physician, Dr. G. F. Buxton. Her past history included accounts of typhoid fever in 1918 and an attack of dysentery some years ago, the exact date not being known. Otherwise, there was nothing of importance in the family history or past history. There was no history of constipation, no recent diarrhea, no history of passing blood. She stated that in the morning of the day seen, that is, about 12 hours earlier, she had been seized with a gnawing pain in her right lower

abdomen. The pain persisted and was later associated with nausea and vomiting. She took a purgative and her bowels moved but the pain did not change character.

Examination showed symptoms and signs more or less typical of a rather advanced case of appendicitis, including a temperature of 100.3, pulse of 90, with marked tenderness a little above McBurney's point and considerable muscle rigidity. The patient was referred to the South Baltimore General Hospital for immediate operation, the diagnosis being acute appendicitis.

Under general anesthesia a right rectus incision showed the abdomen to contain a small amount of slightly cloudy fluid. The appendix was plainly not the cause of the trouble but was removed and, upon further investigation, a mass in the first part of the ascending colon was found. This proved to be a perforated simple ulcer, having an enterolith about 1 cm. in diameter presenting. The perforation was thoroughly walled off by inflamed and edematous appendices epiploicae, thus making up the mass referred to. There was no diverticulum. An area of the colon wall, large enough for repair, was cleared, the enterolith removed and the perforation closed by two purse string sutures of catgut. Cigarette drains were placed about the site and the abdomen partially closed. There was a slight amount of drainage for a week or ten days but the patient's condition was excellent throughout and she was discharged July 17, 1931 with the wound practically healed.

Case 3.—Operated upon by Dr. Frank Lynn. Male, aged 33 years, admitted to University Hospital August 5, 1929, with pain in the lower part of the left side of the abdomen. He had had a similar attack a few months previously, at which time a diagnosis of diverticulitis of the sigmoid was made but his symptoms subsided so no operative procedure was undertaken. When admitted on the above date, immediate laparotomy was done. The appendix was found to be normal but a perforated ulcer of the sigmoid was discovered. The ulcer was covered with exudate and about it there was a considerable amount of murky fluid. The ulcer was closed and the abdomen drained, with prompt relief. As stated, in the beginning of this paper, the subsequent course of this case, with x-ray findings, have made it appear that the patient now has a definite diverticulitis of the sigmoid.

Case 4.—Dr. Frank Lynn, when interrogated about Case 3, reported this case.

Female, aged 64, admitted to University Hospital June 5, 1932, plainly suffering with a general peritonitis of unknown origin and found at operation to be due to a perforated simple ulcer of the sigmoid. A culture of the purulent material showed hemolytic streptococcus of virulent strain. The ulcer was repaired and the abdomen drained but the patient succumbed within a few hours.

Herewith are reported two cases of simple ulcer of the colon in addition to those previously reported by me in the *Annals of Surgery* of June, 1931, with some doubt cast upon one reported at that time. However, there are definitely added one additional case of perforation of the ascending colon and one of the sigmoid. Simple ulcers of the intestinal tract below the duodenum are rather uncommon but occur with sufficient frequency to be given consideration in the diagnosis of abdominal conditions. In addition to those of the large intestine herewith reported, there have occurred recently in the services of colleagues, two perforations of simple ulcers of the small intestine. It is hoped that these will be reported and further attention called to the subject of intestinal ulcers.

DISSECTING ANEURYSM OF THE AORTA

A REPORT OF FIVE AUTOPSIED CASES¹

By CHARLES J. FARINACCI, M.D.

BALTIMORE, MD.

Dissecting aneurysm of the aorta is a rare, though important lesion of the vascular system. Recognition of the condition as a pathological entity is generally accredited to Morgagni (1) in 1761, although the best early description was that by Laennec (2) in 1826. Since the time of Morgagni considerably more than 400 cases of dissecting aneurysm have been reported in the literature. The vast majority of these were not recognized clinically. The correct clinical diagnoses have been made in very few cases as shown by the reports of Gager (3), Etling (4), Samson (5), and Kellogg (6). The lesion generally described as "Dissecting Aneurysm" has unfortunately been reported in the literature under several different headings. Prominent among these are: Traumatic aneurysm, spontaneous rupture of the aorta, and median necrosis aortae idiopathica cystica (Erdheim).

The lesion consists essentially of a splitting or separation of the medial coat of the aorta. The splitting may be limited or it may involve the aorta throughout its entire extent, producing at the same time separation of the medial coat of the larger aortic branches. In the majority of cases there is an associated tearing of the intima with subsequent rupture of the adventitia. The intimal tears are as a rule clean cut and in the transverse direction. They occur most commonly at a point within three or four centimeters of the aortic valve. There may be a second intimal tear in the lower portion of the aorta through which the blood may re-enter the aortic lumen. The adventitial rupture, which is responsible for the sudden death that occurs in a considerable number of these cases, allows the blood to escape into the pericardium, pleural cavity, mediastinum, esophagus, or bronchus.

The etiology of dissecting aneurysm is obscure. Early investigators stressed the importance of trauma with injury to the vessel wall from within (hypertension) or of external violence. Disease of the intima (arteriosclerosis) was likewise thought to have an etiologic bearing. As a matter of fact, it is quite unlikely that heightened blood pressure will cause rupture in a normal aorta. Klotz and Simpson (7) in a post-mortem study of the aorta of persons between the ages of twenty and forty were unable to produce rupture with pressures up to 1000 mm.

¹ From the Department of Pathology, School of Medicine, University of Maryland.

Hg. Oppenheim (8) states that rupture of the aorta will not occur until the pressure reaches about 3000 mm. Hg. On the other hand, it must be admitted that falls or other forms of external violence have produced aortic tears. Intimal arteriosclerosis seems to play no important part in the production of the lesion, since the intimal tears when they occur are found to bear no relation to sclerotic patches. The incidence of syphilis with dissecting aneurysm is so rare that the presence of syphilis is regarded by most authorities as merely coincidental. Recently, Erdheim (9), Tyson (10), Moritz (11) and others have described focal degenerative changes in the media which they believe to be the determining factor in the production of dissecting aneurysm. Tyson (10) believes that the process begins with obliterative changes in the vasa vasorum, which lead to medial degeneration and that unsupported vasa vasorum rupture causing the formation of an intramural hematoma. That this may be the source of hemorrhage in some instances is shown by his report of three cases in which there was no break in the intimal lining. Erdheim (9) stresses a peculiar patchy type of chromatrophic medial degeneration. Moritz (11) has cited three cases of spontaneous rupture of the aorta in which he found cystic necrosis of the medial coat.

The lesion is seen most frequently in males between the ages of 45 and 60 years. Hypertension, cardiac hypertrophy, and a moderate or severe arteriosclerosis are usually present. The onset is sudden and may follow exertion or excitement. There is sharp, tearing, substernal pain which may be progressive, appearing between the scapulae, or the pain may be in the abdomen or groins. Circulatory disturbances resulting from tearing or dissection of the aortic branches may lead to hemiplegia, gangrene of the extremities, or urinary suppression. According to Crowell (12) 61 per cent of the patients die almost immediately from complete rupture. From 10 to 15 per cent survive for several days and then die suddenly from rupture through the adventitia. A small number recover and it is in these cases that the medial separation may remain as a blind pouch or as a false endothelial lined channel through which blood may flow. These are the so-called "healed" aneurysms that are occasionally seen at autopsy.

In a series of 1120 consecutive autopsies performed at the University Hospital, there were five cases of dissecting aneurysm of the aorta. These cases are the basis of this report.

REPORT OF CASES

Case I.—Autopsy No. 1145, white male, age 45 years, admitted to the University Hospital, August 8, 1925.

Clinical history.—The onset of the present illness was sudden, the patient vomited about one quart of blood and fainted. He was unconscious when seen by the family physician. On admission to the hospital, the blood pressure was 130/80. There was no further vomiting following admission to the hospital. There was the history of a penile sore in 1900, and the patient had had antiluetic treatment in 1920. The past history was otherwise negative. During his hospital stay, the patient remained quite weak and he appeared acutely ill. His pulse remained rapid and thready. Death occurred four days after the onset of his illness.

Clinical diagnosis.—Hemorrhage from upper gastrointestinal tract.

Autopsy findings.—Examination of the aorta showed a tear involving the intima and a part of the media of the thoracic aorta at a point opposite the bifurcation of the trachea. In this portion of the aorta the split layers of the media were widely separated and filled with a clot. The dilated external layer composed of a portion of the media and the adventitia presented a small tear which communicated with the lumen of the oesophagus. Throughout the thoracic and abdominal portions of the aorta, there was a widespread dissection of the media which extended into and involved the common iliac arteries. Blood from the aneurysm had re-entered the normal channel through a split near the origin of the common iliac arteries.

The aorta showed the furrowing and scarring characteristic of syphilis. Atheromatous plaques were numerous. There was generalized arteriosclerosis with moderate arteriosclerotic scarring of the kidneys. The heart weighed 430 grams. The hypertrophy was most marked in the left ventricle.

Histological examination of the wall of the aorta showed separation of the media, adventitial and medial small round cell infiltration, scattered scarring of syphilis, and subintimal atheromatous patches. There were no other noteworthy histologic changes in this tissue.

Case II.—Autopsy No. 1465, white male, age 46 years, admitted to the University Hospital, May 28, 1929.

Clinical history.—Patient was admitted to the hospital with a complaint of shortness of breath, pain in the chest and abdomen, pain in the right groin and numbness of the right leg. On May 14, 1929, while working at home the patient sustained a fall of some three or four feet. He was badly bruised and went to bed. He did not appear acutely ill until May 25, 1929, when, because he had vomited blood, a physician was called. The past history was negative for pre-existing cardiac disease.

On admission the patient was perspiring profusely and appeared anxious and alert. The blood pressure was 94/60, pulse 140 per minute, rhythmic, but thready. The blood Wassermann reaction was negative. In the hospital, his condition improved to such an extent that it was difficult to keep him in bed. On June 5, 1929, while on the way to the lavatory, he suddenly screamed and fell to the floor. He died almost immediately. The clinical diagnosis was pulmonary embolism.

Autopsy findings.—The essential lesions were those found in the cardiovascular system. In the aorta at a point 2 cm. above the semilunar valve, there was a complete rent which encircled the aorta. This rent involved the intima and a portion of the media. Throughout the extent of the aorta, from the root to the iliac bifurcation, there was wide-spread separation of the fibers of the medial coat. This dissection involved the innominate, the left common carotid, and the left subclavian arteries. In the thoracic portion of the aorta, the roots of the intercostal arteries were torn across. The blood from the aneurysm had returned to the circulatory system through a tear in the left common iliac artery. The right common iliac artery was almost completely occluded by a recent thrombus. Near the root of

the aorta, in that part of the aneurysmal sac composed of a portion of the media and adventitia, there was a tear which communicated with the pericardial sac. The pericardium contained 1000 cc. of blood. The heart was hypertrophied and with



FIG. 1. DISSECTING ANEURYSM OF CASE II WITH A COMPLETE CIRCULAR LACERATION OF THE INTIMA JUST ABOVE THE AORTIC CUSPS

The adventitia has ruptured into the pericardial sac causing a hemopericardium.

the attached aorta weighed 790 grams. The aorta showed no gross evidence of syphilis. Arteriosclerotic changes were relatively slight.

Histological examination of the aorta showed the intima to be slightly thickened

by fibrous connective tissue, in the meshes of which were small round cells. In the media there were many cystic areas which were bounded by elastic fibers. Many of the remaining muscle fibers were degenerated and appeared as pink staining granular material. In the aneurysmal lumen, there was a large thrombus which showed early organization. The adventitia contained a few round cells and appeared oedematous.

Case III.—Autopsy No. 1623, colored male, age 61 years. Admitted to the University Hospital, October 1, 1930.

Clinical history.—The patient was brought to the hospital in a state of coma with the history that he had been found unconscious in a closed room into which gas from several unlighted jets was flowing. During his stay in the hospital, the patient partially regained consciousness but remained in a stupor most of the time. His blood pressure was 114/70. Both blood and spinal fluid Wassermann reactions were negative. He died with the physical signs of a bronchopneumonia. The clinical diagnosis was illuminating gas poisoning, generalized arteriosclerosis, bronchopneumonia.

Autopsy findings.—At autopsy there was a marked generalized arteriosclerosis with involvement of the cerebral vessels and rather old areas of softening in the cerebrum. The kidneys showed a rather advanced stage of arteriosclerotic disease. The heart was moderately hypertrophied. It weighed 400 grams. The coronary arteries were sclerotic and myocardial fibrosis was rather marked. The aorta showed extensive arteriosclerotic changes. There was a transverse tear in the thoracic aorta and a dissection of the media which extended from the descending arch to the coeliac axis. There was a second tear in the aortic wall at a point near the coeliac axis, through which the blood re-entered the aortic lumen. The medial separation was for the most part limited to the left side of the aorta. Several well organized thrombi were found in the tract of the aneurysm.

Histological examination of several sections of the aorta showed the intima to be markedly thickened. The subendothelial layer was thickened and composed of hyalinized fibrous connective tissue. Beneath this layer, the tissue was degenerated and showed numerous spaces left by the dissolution of fat crystals. In several places there were large black staining blotches of calcium. The media showed the elastic fibers to stain fairly normal but the muscle fibers were poorly stained. The adventitia was oedematous. The vasa vasorum were filled with red blood cells.

Case IV.—Autopsy No. 1911, colored male, age 40 years. Admitted to the University Hospital, January 13, 1933.

Clinical history.—The patient entered with complaint of pain in the chest and shortness of breath. He had been short of breath for the past two years. In 1931 he fell a distance of about 3–4 feet and fractured the 10th rib on the right. At this time he developed pneumonia and remained in the hospital for one month. While in the hospital, at this time, his blood pressure varied from 180/120 to 164/100. He had an hypertrophied heart and evidence of peripheral arteriosclerosis. His blood Wassermann was negative.

On January 9, 1933, after indulging in moderate exercise, the patient was suddenly seized with a pain in the chest. He felt as though a bone had lodged in his throat and that he was unable to bring it up. Four days after the onset of his present illness, he was admitted to the hospital. On admission the patient did not appear acutely ill, his blood pressure was 240/160. The x-ray report of his chest noted a marked enlargement of the heart with a fusiform dilatation of the aorta, suggesting

an aneurysm. On January 15th he complained of a terrific pain in his chest and plunged headlong out of bed. He died almost immediately. It was thought that his death was due to coronary sclerosis.

Autopsy findings.—Examination of the aorta showed a clean cut transverse medio-intimal tear at the point which marks the junction between the ascending and



FIG. II. DISSECTING ANEURYSM OF CASE IV SHOWING AN ALMOST COMPLETE CIRCULAR TEAR OF THE INTIMA AT THE JUNCTION OF THE ASCENDING AND TRANSVERSE ARCH

There is a large amount of blood in the aneurysmal sac. The dissection extends down to the coeliac axis. Marked arteriosclerosis is present. The tear at the beginning of the thoracic aorta is a postmortem cut.

transverse arch. The tear almost completely encircled the aorta. It was in no relation to arteriosclerotic patches in the intima. Throughout the aorta, from its root to the coeliac axis, there was an extensive separation of the media. At no point did the blood from the aneurysm re-enter the lumen of the aorta. Along the transverse arch, the external portion of the sac was bulging. At a point opposite the distal third of the transverse arch, there was a tear in the external portion of the sac through which blood had escaped into the left pleural cavity. There was a left hemothorax (1500 cc.). The heart showed marked hypertrophy, especially of the left ventricle. There was a generalized arteriosclerosis with rather marked involvement of the vessels of the kidneys and brain.

Histological examination of sections of the aorta showed the intima thickened by the presence of an increased amount of fibrous connective tissue. Beneath this layer the tissue appeared degenerated, showing many spaces left by the dissolution of fat crystals and cholesterol. The internal elastic membrane was frayed in places. The media showed fairly normal appearing muscle fibers, but in places the muscle fibers were poorly stained. The adventitia showed an occasional small round cell in the region of the vasa vasorum.

Case V.—Autopsy No. 1999.

Clinical history.—The patient, a white male, age 45 years, was admitted to University Hospital on October 29, 1933, in a condition of profound shock and died in 23 hours. He had been in excellent health and without any complaints until 2 p.m. October 29th. At that time, while eating his mid-day meal, he suddenly developed a severe pain over his precordial area which extended into his left shoulder. A few hours later his family physician found him irrational, pulseless, and in a state of collapse. His left arm was cold and cyanotic. Blood Kolmer was negative. Blood pressure (right arm) was 120/82.

Physical examination disclosed an acutely ill patient in shock. His left arm was considerably swollen, especially in the upper portion and showed a cyanotic discoloration. Several superficial blebs had appeared on his arm. Pulse could not be obtained in the left radial or brachial, though it could be felt in the left carotid artery. The right radial pulse rate was 110 per minute. A to and fro murmur was heard over the aortic area. The heart was not enlarged. The breath sounds over the left base were diminished.

Electrocardiographic report on October 30, 1933, suggested coronary heart disease. The patient's condition remained unchanged until 1 p.m. of the same day. His temperature ranged between 100–96.4°F. His pulse varied between 110–120 per minute. At 1 p.m. he suddenly collapsed and after a few minutes of labored breathing, expired. The clinical diagnosis was: Thrombosis of the left subclavian artery; probable cerebral embolism.

Autopsy findings.—The external examination of the body showed a marked distention of the great neck vessels. The left upper extremity was swollen and indurated showing several denuded and discolored areas. The circumference of the left arm at its mid-point measured 39 cm., that of the right arm at a corresponding level was 37 cm.

The pericardial sac was filled with about 600 cc. of blood. This bleeding had occurred through a small rent 0.7 cm. in length in the aortic wall at a point 4 cm. above the base of the heart. The heart weighed 590 grams and showed hypertrophy of both ventricular walls. There was a moderate arteriosclerotic involvement of the coronary arteries. The coronary orifices and heart valves appeared normal. At a point 3 cm. above the aortic cusps, there was a clean transverse tear which involved

the intima and a portion of the media. The circular rent involved all but 1 cm. of the aorta. Although the aorta showed marked sclerotic changes, the rent occurred at an uninvolved point. From the aortic ring to the iliac bifurcation, there was a wide-spread dissection with a separation of the aorta into what virtually constituted



FIG. III. DISSECTING ANEURYSM OF CASE V EXTENDING THE WHOLE LENGTH OF THE AORTA

There is an almost complete circular tear of the intima just above the aortic cusps. Moderate arteriosclerosis is present.

two tubes. The inner was composed of intima and a portion of the media, whereas the outer tube was composed of a portion of the media and the adventitia. The dissection involved the innominate, left common carotid, and the left subclavian arteries. The original lumen of the latter vessel was almost completely occluded by the presence of the blood between its coats. The intercostal arteries were not involved, but there was dissection of the coeliac artery, left renal, and the common iliac arteries. The blood did not re-enter the original lumen.

Histological examination of several sections of the aorta showed a marked thickening of the subintimal layer. The subendothelial tissue presented many fibrous connective tissue cells and small round cells. Beneath this layer the tissue was composed of lipoid spaces and showed areas of calcium deposits. The internal elastic membrane was frayed. The media showed many variously sized spaces, some of which were filled with red cells. In the region of the dissection, there was an irregular area in which the muscle and elastic fibers had undergone necrosis and appeared as a hyaline mass. In and about this area there were seen collections of red cells enmeshed between the elastic fibers. The adventitia showed an infiltration of leucocytes and small round cells situated in great numbers about the vasa vasorum.

SUMMARY

1. Five cases of dissecting aneurysm of the aorta are reported.
2. All the patients were males, their ages varying between 40 and 61 years.
3. A history of trauma was elicited in two cases.
4. Syphilitic mesaortitis was an associated finding in but one case.
5. Generalized arteriosclerosis and cardiac hypertrophy were present in all five cases. The intimal tear occurred in all five cases at an uninvolved site.
6. Chronic vascular nephritis was an associated finding in two cases.
7. In 4 cases death was due to a rupture of the aneurysm.
8. In one case the aneurysm was an incidental finding.

I am greatly indebted to Dr. Hugh R. Spencer for his kindly help and constructive criticism in preparing this article.

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ANEURISM OF THE TEMPORAL ARTERY

REPORT OF A CASE¹

BY NATHAN WINSLOW, M.D., AND MONTE EDWARDS, M.R.C.S. (Eng.)

BALTIMORE, MD.

Aneurism of the temporal artery is not common. The first to describe this lesion was Bartholin, in 1740. Thirty-one years later, Monro reported the next observation, and it was not until 1796 that Palletta registered the third example. During the first half of the nineteenth century, when temporal arteriotomy was a popular pastime, aneurism at this site occurred more often, but with the passing of that fad, its incidence declined rapidly.

Offhand, one would imagine that the temporal artery from its extensive course along the skull with its proneness to injury would be a frequent seat of aneurism. Statistical studies on aneurism, however, have proven this not to be the case. For instance, out of 179 external aneurisms collected by Lisfranc, in 1834, there are two of the temporal, but it suffices to read the reports of them to appreciate that one (Pelletan's) is an erectile tumor and the other (Wardrop's) a circoid aneurism. In a digest of 551 aneurisms published in Great Britain from 1765 to 1847, Crisp mentions only a single example of the temporal (Benson's). Among the 188 aneurisms treated by digital compression that were assembled by Fischer, in 1869, there are two only of the temporal artery (Bouvier's and Mirault's), but this is a mistake for these are the same and not different cases. In a study of 332 traumatic aneurisms made by E. v. Spruner-Merz, in 1877, he cites 9, or 2.5 per cent as involving the temporal artery. Of 982 aneurisms following injuries received in war, Simon, in 1917, lists 8, or 0.8 per cent, as arising from the temporal artery. Of the 195 war aneurisms under the supervision of H. Küttner, O. Hahn (1921) reports that only 2, or 1.02 per cent, were of the temporal artery. By far the most comprehensive treatise on temporal aneurism is that of Santi's, published in the *Arch. gén. de méd.*, Paris, 1884, 7.s., xiv, 513. Therein are collected 40 cases. Inasmuch as the material which has appeared since then has never been correlated, and especially as modern text-books pay scant attention to the subject, the completion of the history of temporal aneurism, together with an account of a personal observation, should be of interest to the profession.

¹ From the Surgical Department of the University of Maryland, School of Medicine.

REPORT OF CASE

The patient, a negro, male, laborer, age 28 years, was admitted into the University of Maryland Hospital, June 26, 1925. During childhood he had an attack of anterior poliomyelitis which left him with a hemiparesis of the right side. He had never had any venereal disease. The present trouble began in November, 1923, when he was struck in the left temple by a piece of cement. The skin was broken and the wound bled freely, but he soon staunched the bleeding by pressure with a handkerchief. The wound was of small size. Although the cut was not dressed, it healed satisfactorily and the man noticed no



FIG. 1. PHOTOGRAPHS OF PATIENT SHOWING TWO ANEURISMAL SWELLINGS

ill effect from it until January, 1924, when a continuous, unremitting pain and a roundish swelling appeared in front of the ear at the site of the injury. The lump had gradually increased in size. A month prior to admission, another but smaller mass appeared above and ventral to the original tumor.

On admission, examination revealed in the left temporal region, immediately in front of the ear and just above the zygoma, a hemispherical swelling. It was regular in outline, the size of a hen's egg, and transmitted to touch an expansile impulse which was synchronous with the beat of the heart. The tumefaction harbored a bruit. It was slightly movable, and was attached neither to the skin nor to the zygoma. Its size was influenced but slightly by pressure.

Anterior to the main swelling and on a little higher level was another mass, the size of a pea, which presented the same physical signs. There was a nystagmus of both eyes which oscillated almost ceaselessly from side to side; a right-sided hemiplegia with spasticity; a positive Babinski sign and ankle-clonus. A blood-Wassermann test was negative. X-ray examination showed no evidence of aortic enlargement and the cranial bones of



FIG. 2. ARTIST'S REPRESENTATION OF POSITION OF ANEURISMS, AND THEIR RELATIONSHIP TO OTHER STRUCTURES

normal thickness without any areas of rarefaction. The blood-chemistry was: Non-protein nitrogen, 38; creatine, 1.7; sugar 109 mgm. respectively per 100 cc. of serum.

The diagnosis offered no difficulty. Both swellings were plainly aneurismal in character and of traumatic origin. The larger one was located on the left superficial temporal artery, and the smaller on the frontal branch of the same vessel.

Operation.—On July 3, 1925, under ether anesthesia, an incision, $1\frac{1}{2}$ inches long, was made parallel to and immediately below the zygoma at a short distance from the main swelling. The parotid gland was freed of its connections until the superficial temporal artery was encountered. The artery was doubly ligated and divided between the ligatures. Through two small scalp incisions, the parietal and frontal branches of this vessel were also tied, the latter distally to the smaller aneurism. The initial incision was then extended around the anterior aspect of the mass; a flap was raised and the aneurisms were removed en masse. Numerous small arterial twigs were encountered emerging from the larger sac. These were secured before division. The wound was sutured without drainage. With the removal of the aneurisms, all symptoms ceased. The patient was discharged from the hospital on July 18, 1925, as cured.

Pathological report

Gross appearance.—The specimen is an almost spherical mass, 3.2 cm. in diameter, grooved upon the medial surface. From it radiated vessels of varying caliber, five in number. On section it consists of an outer covering of dense and inelastic consistence of almost uniform thickness of 2 to 3 mm. Within, there is a quantity of laminated clot, firm and of light red color at the periphery, softer and of darker hue towards its centre. Some recent coagulum is demonstrable from the opening into it of the superficial temporal artery and through its middle to the peripheral vessels.

Microscopic.—Sections of aneurism show a wall composed of dense hyaline fibrous tissue. There are calcareous plaques in the wall. The sac contains a mass of red blood cells, leucocytes, and strands of fibrin.

COMMENT

This study is based on 108 cases of temporal aneurism, 107 examples of which were culled from the literature and the one herewith described.² Three of these cases were reported in the eighteenth

² This study does not include the cases of Malagodi, Cavallini, Percy, Purmann, Cloquet, Mèrat, Marsh, of Küttner, nor of Bier.

The undoubtedly genuine case of temporal aneurism described by Malagodi was dropped because (1) the reference (*Raccoglitori medico di Fano, 1839, May*) supplied with the abstract was incorrect, and because (2) we neglected to preserve the source of our information. In discussing the case the commentator remarked: Malagodi had really used the twisted suture before Malgaigne with the sole aim of preventing secondary hemorrhage, but this was secondary to the ancient operation. After tying its central end, he incised the sac, and then united the edges of the wound with a twisted suture. However, it failed, for on the fifth day several hemorrhages compelled him to resort to compression. Malgaigne is in reality the first who applied the procedure to the cure of aneurism.

The cases said to have been observed by Cavallini, Percy, Purmann, Cloquet, Mèrat, and Marsh were omitted for the following reasons: (1) insufficient data, and (2) failure to find either the original report or a reliable transcript.

The two cases of Küttner listed by O. Hahn and the case cited by Küttner himself were dropped because the authors furnished no information concerning the cases and because (2) the meagre data made it impossible for us to determine with certainty the exact number of cases.

Four cases of traumatic temporal aneurism operated on by Bier were excluded for want of data.

century; 76 in the nineteenth; and 29 since then (Table 1). However, the four cases cited by v. Bergmann, in the 1900 edition of his Hand-

TABLE 1
Summary of cases according to the century in which they occurred

	OPERATED ON					NOT OPERATED ON					TOTAL
	Cured	Im- proved	Unim- proved	Not stated	Died	Cured	Im- proved	Unim- proved	Not stated	Died	
18th century											
Spontaneous.....	0	0	0	0	0	0	0	0	0	0	0
Traumatic:											
a. Open.....	0	0	0	0	0	0	0	0	0	0	0
b. Closed.....	1	0	0	0	0	1	0	0	0	0	2
c. No report.....	0	0	0	0	0	0	0	0	0	0	0
Unclassified.....	1	0	0	0	0	0	0	0	0	0	1
Arterio-venous.....	0	0	0	0	0	0	0	0	0	0	0
Total.....	2	0	0	0	0	1	0	0	0	0	3
19th century											
Spontaneous.....	3	1	0	0	0	3	0	0	1	0	8
Traumatic:											
a. Open.....	17	0	0	1	0	10	0	0	1	0	29
b. Closed.....	13	1	0	1	0	8	0	0	2	0	25
c. No report.....	0	0	0	0	0	0	0	0	0	0	0
Unclassified.....	1	0	0	2	0	1	0	0	0	0	4
Arterio-venous.....	9	0	0	0	0	0	0	0	0	1	10
Total.....	43	2	0	4	0	22	0	0	4	1	76
Since 1900											
Spontaneous.....	1	0	0	0	0	0	0	0	0	0	1
Traumatic:											
a. Open.....	9	0	1	0	0	0	0	0	2	0	12
b. Closed.....	5	0	0	0	0	0	0	0	1	0	6
c. No report.....	3	0	0	2	0	0	0	0	0	0	5
Unclassified.....	0	0	0	0	0	0	0	0	0	0	0
Arterio-venous.....	4	0	0	1	0	0	0	0	0	0	5
Total.....	22	0	1	3	0	0	0	0	3	0	29
Grand Total.....	67	2	1	7	0	23	0	0	7	1	108

buch d. prakt. Chir., would seem more properly to belong to the preceding century. Nine were spontaneous in origin; 79 traumatic; in 5, the cause was not given, and 15 were of the arterio-venous type.

Of the 79 traumatic cases, 41 were consecutive to open wounds, 33 to contusions and in 5 the nature of the injury was not specified. All of the 15 arterio-venous fistulae were attributed to trauma. Temporal aneurism occurs more often in men than in women. Seventy-five of the patients in this series were males and 13 were females, or roughly a ratio of 6 to 1. In the remaining 20 cases no mention was made of the sex (Table 2). The right side was affected 32 times; the left, 38 times, and in 39, no mention was made of the side involved. While the number of cases is too small from which to draw definite conclusions, the left side would appear to be slightly more liable to involvement than the right (Table 3). Of the 108 patients, 90 were cured; 2,

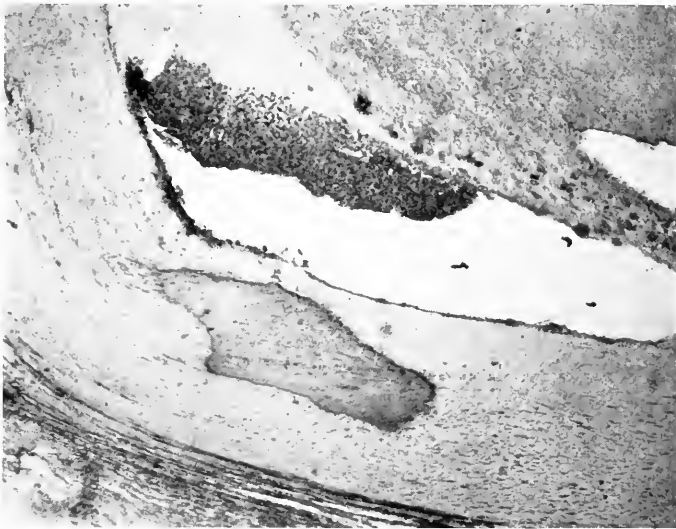


FIG. 3. PHOTOMICROGRAPH OF ANEURISMAL WALL

improved; 1 showed no improvement; in 14, the result was not stated, and 1, died (Table 4). Temporal aneurism is preeminently a disease of the adolescent and of the young adult, for of the 59 patients whose ages were recorded, 48 were under and 11 over 40 years of age. The youngest patient was 7 years old and the eldest, 78. The ages of 49 were not recorded. Of these, 22 were described as men; 1 as a child; 1 as a woman and 1 as a youth. The greatest number of cases occurred in the third decade of life, namely 25. In the fourth decade, there were 11 cases and in the second, 9 (Table 5). In only 64 of the cases was the duration of the lesion recorded. The shortest time that had elapsed between the appearance of the aneurism and the consultation

with the physician was 2 weeks. Seven cases were in this group. At the other extreme of the series was an aneurism of 36 years' duration. Forty-eight of the 64 cases came under observation during the first year of their existence (Table 6). Operation was performed on 77 cases, with 67 cures; 2 improvements; 1 recurrence, and no deaths (Table 7). In the remaining 7 cases subjected to surgical interference, the result wasn't stated. Conservative measures were used as the

TABLE 2
Summary of sexes

	MALES	FEMALES	NOT STATED	TOTAL
Spontaneous.....	5	4	0	9
Traumatic:				
a. Open.....	32	4	5	41
b. Closed.....	24	4	5	33
c. No report.....	1	0	4	5
Unclassified.....	1	0	4	5
Arterio-venous.....	12	1	2	14
Total.....	75	13	20	108

TABLE 3
Summary of side affected

	RIGHT	LEFT	NOT STATED	TOTAL
Spontaneous.....	4	2	3	9
Traumatic:				
a. Open.....	13	15	14	41
b. Closed.....	11	13	9	32
c. No report.....	0	0	5	5
Unclassified.....	0	1	4	5
Arterio-venous.....	4	7	4	14
Total.....	32	38	39	109*

* Uytterhoeven's patient had bilateral aneurism.

sole treatment 31 times, with 23 cures, 1 death and no mention of the outcome in 7 of the cases (Table 8). The deceased was a patient under Bushe's care. Three months after a temporal blood-letting for an apoplectic stroke, an arterio-venous aneurism had established itself at the site of the bleeding. As it was not troublesome, no curative measures were attempted. The man died 9 months after the arteriotomy of the cerebral condition and the fatality had no connection with the aneurismal disease. At autopsy, Bushe found a direct

communication between the artery and the vein. In 10 other cases, compression failed and operation had to be instituted before a cure was obtained. In another case, that of Stone's, compression had proved of no avail, but before a contemplated operation could be performed, pneumonia supervened, during the course of which an inflammation of the scalp occurred with a spontaneous cure of the aneurism. In a small percentage of cases, operation did not succeed

TABLE 4
Summary of cases

	CURED	IMPROVED	UNIM- PROVED	NOT STATED	DIED	TOTAL
Spontaneous.....	7	1	0	1	0	9
Traumatic:						
a. Open.....	36	0	1	4	0	41
b. Closed.....	28	1	0	4	0	33
c. No report.....	3	0	0	2	0	5
Unclassified.....	2	0	0	3	0	5
Arterio-venous.....	14	0	0	0	1	15
Total.....	90	2	1	14	1	108

TABLE 5
Age incidence

	1-9 YEARS	10-19 YEARS	20-29 YEARS	30-39 YEARS	40-49 YEARS	50-59 YEARS	60-69 YEARS	70-79 YEARS	NOT STATED	MEN	WOMAN	CHILD	YOUTH	TOTAL
Spontaneous.....	0	0	3	1	0	1	0	1	1	1	1	0	0	9
Traumatic:														
a. Open.....	1	2	10	5	1	0	0	0	6	15	0	1	0	41
b. Closed.....	2	5	9	2	3	0	1	1	5	4	0	0	1	33
c. No report.....	0	0	0	0	0	0	0	0	4	1	0	0	0	5
Unclassified.....	0	0	0	0	0	0	0	0	5	0	0	0	0	5
Arterio-venous.....	0	2	3	3	0	1	1	1	3	1	0	0	0	15
Total.....	3	9	25	11	4	2	2	3	24	22	1	1	1	108

in affecting a final cure until supplemented by bloodless methods or by further surgical procedures. When additional surgery proved necessary, some operated at once while others waited a while.

The symptoms are characteristic. Situated just in front of the ear in the course of the temporal artery is a circumscribed, globular, pulsatile swelling harboring a bruit and beating in unison with the heart. The tumor varies in size from that of a pea to that of an orange (Bartholin, Barrière), but it generally is no larger than a nut.

Unless the sac has undergone consolidation, pulsation can be both seen and felt in it. To the touch the mass is elastic, expansile throughout its entire extent, and slightly reducible. Both the murmur and the pulsation disappear when the temporal artery is compressed below the site of the aneurism, to recur promptly with the reestablishment of the circulation, during the arrest of which the size of the sac shrinks somewhat. The patient may complain of a buzzing in the

TABLE 6
Duration of lesion

	2 WEEKS	3 WEEKS	4 WEEKS	5 WEEKS	6 WEEKS	2 MONTHS	3 MONTHS	4 MONTHS	5 MONTHS	6 MONTHS	8 MONTHS	9 MONTHS	1 YEAR	1½ YEARS	2 YEARS	3 YEARS	5 YEARS	7 YEARS	9 YEARS	25 YEARS	36 YEARS	SOME TIME	SOON	NOT STATED	TOTAL
Spontaneous.....	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	3	1	0	0	0	1	1	1	9
Traumatic:																									
a. Open.....	4	2	4	2	5	2	2	1	0	1	0	0	0	2	0	0	0	0	0	0	0	3	4	9	41
b. Closed.....	2	1	6	1	1	1	0	0	1	0	1	0	4	0	0	0	0	1	0	0	0	1	2	9	33
c. No report.....	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	5
Unclassified.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
Arterio-venous.....	1	0	2	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	1	1	1	0	0	4	15
Total.....	7	3	12	3	6	4	2	1	1	1	2	1	5	2	1	3	3	2	2	1	1	1	5	7	108

TABLE 7
Summary of cases operated on

	CURED	IMPROVED	UNIMPROVED	NOT STATED	DIED	TOTAL
Spontaneous.....	4	1	0	0	0	5
Traumatic:						
a. Open.....	26	0	1	1	0	28
b. Closed.....	19	1	0	1	0	21
c. No report.....	3	0	0	2	0	5
Unclassified.....	1	0	0	3	0	4
Arterio-venous.....	14	0	0	0	0	14
Total.....	67	2	1	7	0	77

ear, but the souffle is seldom sufficiently intense to disturb his sleep (Fontagnères). In isolated instances pulsation may, however, be absent or so weak as to escape detection (Hall). Under such circumstances, unless great care be exercised, the lump may be mistaken for an abscess and lanced. This lesion gives rise to few or to no systemic disturbances, and is bothersome mostly from its unsightliness. At times more than one aneurism may occur on the temporal artery or its branches (Malgaigne, Rizet, Winslow and Edwards).

The diagnosis should offer no particular difficulty, but there is a possibility of temporal aneurism being mistaken for a cyst raised by an artery (Frestel). Richardson's case had been diagnosed by others as a congenital epidermoid cyst. This author points out that pulsation in a small tumor of the sort may be overlooked unless the possibility of aneurism be considered. When temporal aneurism harbors neither souffle nor pulsation on account of solidification of its contents, it may be mistaken for a sebaceous cyst. According to Velpeau, pulsating hematomas may be confused with it, and Robinson speaks of its close resemblance to a suppurative hematoma before its aneurismal characteristics have developed. Another disease with which it may be confounded is aneurism of the middle meningeal artery with absorption of the cranial vault, in which case the swelling presents itself directly beneath the skin. However, the history of an injury,

TABLE 8
Summary of cases treated conservatively

	CURED	IMPROVED	UNIM- PROVED	NOT STATED	DIED	TOTAL
Spontaneous.....	3	0	0	1	0	4
Traumatic:						
a. Open.....	10	0	0	3	0	13
b. Closed.....	9	0	0	3	0	12
c. No report.....	0	0	0	0	0	0
Unclassified.....	1	0	0	0	0	1
Arterio-venous.....	0	0	0	0	1	1
Total.....	23	0	0	7	1	31

the site of the lesion and its peculiar characteristics should ordinarily prevent its confusion with cysts, with erectile tumors, with pulsating hematomas or with abscesses.

Aneurism of the temporal artery usually originates in wounds produced by cuts, but a blunt force, such as a blow, can give rise to it (Horsley), or it may occur on rare occasions without any known cause (Table 9). In the traumatic variety, both the artery and its satellite vein may be involved in the process. Gunshot wound as a cause is unusual. This happened 5 times, or roughly 5 per cent of the cases reported. The superficial temporal artery from its extensive distribution and from its course along the surface of the skull, is the branch most often exposed to violence and the one the most frequently the seat of aneurism.

The prognosis of temporal aneurism is good. It neither threatens

life nor endangers health. It presents, however, an ugly deformity and annoys the patient by its throbbing. Operation assures a quick and rapid cure.

TABLE 9

Etiology

	TRAUMATIC			ARTE- RIO VENOUS	SPONTA- NEOUS	UNCLAS- SIFIED	TOTAL
	Open	Closed	No re- port				
Arteriotomy.....	20	0	0	4	0	0	24
Cut with knife.....	1	0	0	2	0	0	3
Cut with rapier.....	0	0	0	1	0	0	1
Cut with splinter of steel.....	1	0	0	0	0	0	1
Cut with soda water siphon.....	1	0	0	0	0	0	1
Cut with glass.....	1	0	0	0	0	0	1
Cut with cane.....	1	0	0	0	0	0	1
Cut in automobile accident.....	1	0	0	0	0	0	1
Cut in railroad accident.....	0	0	0	1	0	0	1
Cut with cement.....	1	0	0	0	0	0	1
Stabbed.....	1	0	0	1	0	0	2
Pecked by rooster.....	1	0	0	0	0	0	1
Gunshot wound.....	4	0	0	1	0	0	5
Fall.....	5	7	0	0	0	0	12
Blow.....	3	12	0	1	0	0	16
Struck with stick.....	0	3	0	1	0	0	4
Struck against box.....	0	1	0	0	0	0	1
Struck against stone.....	0	1	0	0	0	0	1
Struck against wall.....	0	2	0	0	0	0	2
Struck against table.....	0	1	0	0	0	0	1
Struck against bottom of river.....	0	1	0	0	0	0	1
Struck with fist.....	0	1	0	0	0	0	1
Struck with piece of steel.....	0	0	1	0	0	0	1
Struck by falling tree.....	0	0	0	1	0	0	1
Struck with baseball.....	0	1	0	0	0	0	1
Kicked by horse.....	0	2	0	0	0	0	2
Beat head against wall.....	0	1	0	0	0	0	1
Not stated.....	0	0	4	2	0	0	6
Spontaneous.....	0	0	0	0	9	0	9
Unclassified.....	0	0	0	0	0	5	5
Total.....	41	33	5	15	9	5	108

The treatment of temporal aneurism, since 1896, has been limited strictly to operative procedures in spite of the fact that non-operative measures had been used prior to then, on occasion, with complete satisfaction. Before we engage in the discussion of the operative care

of this condition, we shall, therefore, consider briefly its non-operative management with such agenda as compression, coagulatory injections, galvano-puncture, refrigeration and the suture entortillée (Table 10).

Were it as reliable as operation, compression would be the most convenient method of cure for aneurism of this vessel, as it obviates

TABLE 10
*Types of conservative treatment used**

	CURED	NOT GIVEN	DIED	TOTAL
Compression	5	0	0	5
Compression to sac	2	0	0	2
Compression, cold applications	1	0	0	1
Compression of tumor with cork	1	0	0	1
Compression self-administered to vessel	1	0	0	1
Compression on artery, self-administered followed by cork compression on tumor	1	0	0	1
Compression (digital) of artery	1	0	0	1
Compression instrumental	1	0	0	1
Compression of artery (subcutaneous) by passing a thread beneath it	1	0	0	1
Pressure on temporal artery	1	0	0	1
Cold compresses, leeches	1	0	0	1
Injection acetate of iron	1	0	0	1
Injection perchloride of iron, digital and mechanical compression	1	0	0	1
Galvano-puncture	1	0	0	1
Acupressure and acupuncture	1	0	0	1
Strangulation by passing needles beneath sac and binding them together with twisted sutures	1	0	0	1
Treatment not described	1	7	0	8
No treatment	0	0	1	1
Spontaneous recovery, compression had failed but before operation could be instituted, pneumonia supervened with consecutive inflammation of scalp	1	0	0	1
Total	23	7	1	31

* In addition to these cases compression failed 10 times and a cure was obtained only after operation had been performed (see table 11).

the necessity of inflicting a disfiguring wound. It has succeeded in producing a cure after a single sitting of a few hours. On the other hand, it has required as much as 182 hours of pressure spread over a number of days before the aneurismal sac was completely solidified (Santi). According to Ballingall, small temporal aneurisms almost always yield to this treatment. While compression often succeeds, it

frequently fails to produce the expected relief (Fontagnères). In the 24 cases of this series upon which compression was tried, it failed in 10, or 41.66 per cent. Asplund tried every variety of compression in a case under his care without effecting a cure. Langenbeck reported a case in which compression on the carotid and to the temporal arteries had no effect. Burckhardt had to discontinue mechanical compression in a case of his because the pressure of the apparatus caused too much pain. In the arterio-venous type of temporal aneurism, compression has proven worthless. The compression may be applied in the form of pressure on the sac itself or on the proximal side of the affected artery. The usual practice was occasional digital or mechanical pressure on the central end of the vessel. It has even been self-administered with success.

Coagulatory injections have afforded rapid cures in a few instances. The method was first employed by Pavesi on January 15, 1854. He injected 14 drops of liquor ferri acetatis into the sac. At the end of ten minutes, the tumor had completely solidified. It was next used in 1869 by Sklifasowski, who, following an unsuccessful ligation of the common carotid artery for an arterio-venous aneurism between the temporal vessels, injected a solution of perchloride of iron into the sac and nearly lost his patient of an embolic pneumonia, but the treatment caused the sac to become firm and solid. On May 11, 1873, Rizet obtained a definite cure with a single injection of a coagulant. He injected into the sac three drops of perchloride of iron. The beats stopped completely and the tumor became solid and incompressible. In this case, digital and mechanical compression were also employed below the sac for three days. The cure had maintained itself two months later. Apparently this was the last time that a coagulatory injection was employed for the cure of temporal aneurism. The fear of emboli being washed into the circulation seems to have been the chief reason for discarding the method.

A somewhat similar procedure was employed by Girouard in 1855, when he plunged a bistoury into the center of the aneurism and inserted some chloride of zinc paste with satisfactory results. Fontagnères, in 1872, repeated Girouard's measure. In spite of a free hemorrhage when the scar dropped off, the treatment turned out successfully.

Galvano-puncture was used successfully by Pétrequin, in 1845. This is said to be the first time that the method had been applied successfully upon man. Two needles were inserted into the sac and connected with an electric current. The pulsations had stopped completely at the end of the séance which lasted twelve minutes, when the aneurism was replaced by a solidified tumor. Since then the

treatment has never again been applied to the treatment of a temporal aneurism.

The twisted suture or the suture entortillée of the French was employed in 1846 by Malgaigne on two small aneurisms of the temporal artery. He passed beneath each aneurism two needles and joined them with a twisted suture. At the end of the month there was no trace of the aneurisms. Malgaigne thus had the distinction of being the first to use strangulation for the relief of this condition.

Heineke cured his patient by employing acupuncture in conjunction with acupuncture.

Benson, in 1841, was the first and the last to employ refrigeration for the cure of temporal aneurism. He used cold lotions and leeches. A cure quickly followed.

In this connection, it is well to remember that this aneurism may undergo a spontaneous cure on rare occasion. Heineke has observed such an occurrence. The aneurism, consecutive to a contusion, was a little larger than a pea. After increasing slowly in size for some months, the sac became hard and finally disappeared. The question naturally arises, may not the cure obtained by Benson have been the result of natural processes rather than of the treatment instituted. That an apparently spontaneous cure does not always persist is well illustrated by the case reported by Hall. The patient, a Brazilian Indian child, had cut his head in a fall. A priest, who had seen both ends of a vessel which he called a vein, approximated the edges of the wound and applied pressure without ligating the bleeding vessel. It was some time before the tumor put in its appearance. The mass pulsated at one time, but had ceased to beat. Hall thought that the swelling was a cyst but the clear statement made him doubtful of his diagnosis. On the next day, a further examination revealed strong pulsation in the mass. The tumor, however, had remained hard. Hall felt that handling of the swelling must have displaced the clot in the sac. The condition was subsequently cured by an operation.

While non-operative therapy may be used with success, operative attack has established itself as the means best calculated to effect a safe and rapid cure of this condition. A variety of operations may be performed (Table 11). Some secure the temporal artery on the cardiac side of the lesion. Others lay the sac open, turn out its contents and tie the artery at its entrance into or preferably at both poles of the sac (Bartholin, Scarpa, Monro, Gasté, Erichsen). Still others ligate the common carotid artery. This procedure, however, is unwarrantable, because the disturbance to the cerebral circulation caused by ligation of the primitive carotid has its own peculiar dangers.

TABLE 11
*Types of operations practised**

	CURED	IMPROVED	RECURRED	NOT GIVEN	TOTAL
Excision.....	6	0	0	0	6
Excision after ligation above and below sac.....	15	0	0	0	15
Excision after (1) incision with plugging of wound and (2) ligation temporal had failed.....	1	0	0	0	1
Excision, 2 ligatures applied, compression had failed....	1	0	0	0	1
Excision, after ligation of 3 vascular trunks.....	1	0	0	0	1
Excision, after ligation temporal at inferior end.....	1	0	0	0	1
Excision, after ligation temporal below and 2 branches above sac.....	1	0	0	0	1
Excision, after ligation of artery and vein.....	7	0	0	0	7
Excision, after ligation both superficial temporals right occipital and hemostatic circlet around fistula.....	1	0	0	0	1
Excision, after all varieties of compression had failed....	1	0	0	0	1
Incision and injection zinc paste.....	1	0	0	1	2
Incision, ligation temporal at both poles.....	2	0	0	0	2
Incision, ligation temporal at lower pole.....	5	0	0	1	6
Incision, one end only tied, packed.....	1	0	0	0	1
Incision, temporal artery ligated after compression had failed.....	1	0	0	0	1
Incision, ligation temporal artery.....	1	0	0	0	1
Ligation common carotid artery.....	1	2	0	0	3
Ligation C. C. A., temporal not tied for fear of rupturing sac.....	1	0	0	0	1
Ligation C. C. A., failed as had compression before, sac incised and ligation vessel leading into it.....	1	0	0	0	1
Ligation C. C. A., failed, as had ligation temporal, injection perchloride of iron.....	1	0	0	0	1
Ligation external carotid artery.....	0	0	1	0	1
Ligation external carotid artery because temporal artery had ruptured when tied below sac.....	1	0	0	0	1
Ligation E. C. A., failed, ligation temporal failed, incision, deep suture, cautery, packing.....	1	0	0	0	1
Ligation E. C. A. sac opened, clot evacuated, sac packed.....	1	0	0	0	1
Ligation temporal.....	3	0	0	0	3
Ligation temporal after compression had failed.....	1	0	0	0	1
Ligation temporal centrally after compression had failed..	2	0	0	0	2
Ligation temporal distally, attempted ligation central end, ligation transverse facial, injection perchloride iron, ligation temporal.....	1	0	0	0	1
Ligation temporal artery above and below sac.....	2	0	0	0	2
Ligation temporal afferently, incision sac, wound packed.....	1	0	0	0	1
Ligation temporal artery and vein on cardiac side of lesion.....	2	0	0	0	2
Ligation temporal above fistula, excision attempted but abandoned owing to thinness of sac.....	1	0	0	0	1
Division temporal artery, both ends twisted.....	1	0	0	0	1
Operation not described.....	0	0	0	5	5
Total.....	67	2	1	7	77

* Compression failed 10 times and ligation 4 times.

Death occurs in 20 per cent of these cases. Others occlude the external carotid artery. While the mortality associated with this operation is low, the percentage of failure is high and it is not to be recommended. The operation of choice is excision of the sac, because (1) it is easy to do; (2) it is safe; and (3) it offers absolute security against recurrence of the disease. The extirpation is accomplished by isolating and ligating the temporal artery above and below the aneurism along with any collateral twigs entering the sac, excision of the sac and closure of the wound without provision for drainage. According to Chassaig-nac (*Thèse de Paris*, 1848), Ballingall was the first to practise extirpation for the relief of this lesion; but this is a mistake as Burns had performed an excision for temporal aneurism in 1809, and Bushe, in 1827, as a consequence of his experience, had no hesitancy in recommending excision as the surest way to establish a radical cure. Modern surgery has nothing better to offer.

Those interested in a further study of the subject may consult the appended tables. Therein are tabulated the essential features of the 108 cases that compose the series. For the sake of completeness we wish to docket 10 additional cases in which the descriptive matter, accompanying them, does not offer sufficient evidence to warrant a positive statement as to their actual character. All have a distinct bearing, however, on the question of temporal aneurism and should not be dropped without a word of explanation. In order to conserve space, we present them in a supplementary table labeled doubtful cases. The reason for the deletion will be supplied with each case as reported.

BULLETIN

OF THE

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RESEARCH MATERIALS IN MEDICAL LITERATURE

Bibliography is a subject which the average medical practitioner has only lately learned to appreciate. He had known little about it and cared less. With the constantly increasing mass of literature and the growing army of investigators, some familiarity with what is being done in medical science is highly desirable and indispensable to anyone who is attempting to do original work. The lack of this knowledge has often led to much that is both laughable and tragic in the breathless announcement by men whose enthusiasm has outrun their learning of facts already old and well known.¹

The science and art of medicine is so dependent upon its literature that reference to authorities is a recognized part of medical composition. The quantity of such printed matter is very great and quotation of sources is as necessary in medical literature as in any other field of endeavor.²

The accumulation and review of medical literature as a preliminary step in the preparation of medical papers is often a perplexing experience, particularly to the younger men of the profession who may, as yet, have had little practice in such work. With the enormous volume of medical literature now being published it is a heavy task for the young physician who is unskilled in the use of catalogues and indices, who does not readily recognize such articles as may possibly contain valuable material bearing on his subject, and who also may not know the scientific standing of the various journals.³ There are in all

¹ Wilson, H.: Medical Bibliography, *Journal of American Medical Assn.*, 55: 1130, September 24, 1910.

² Place, Frank, Jr.: Verify Your References, *New York Medical Journal*, 104: 697, October 7, 1916.

³ Mellish, M. H.: Suggestions on Use of Reference Library in Preparation of Medical Papers, *Journal-Lancet*, 34: 534, 1914.

approximately 1,600 medical journals but the bulk of the really important work of the profession is recorded in approximately one hundred and fifty periodicals of scientific value. This is a large number compared to about twenty in the law profession.

For the purpose of storing up medical progress in deed and thought, medical books and journals exist and in them we find descriptions of the processes of work that others have employed. To find these papers in the great mass of literature, indices and catalogues were invented. In addition, most writers, in reporting their work or ideas, read and gather the publications that relate to their particular task; and then to help others in the same line, to record their own research and to have a line of defense against criticism, they print with their report a list of papers they have consulted.

A large medical library is in itself discouraging to many inquirers, and I have become quite familiar with the peculiar expression of mingled surprise, awe and despair, which is apt to steal over the face of one not accustomed to such work when he first finds himself in the presence of a mass of material which he wishes to examine for the purpose of completing his ideal bibliography of let us say inguinal hernia, amebic dysentery or the functions of the liver.

Unlike the folk literature of any people, which depends so largely on form and poetical idealism, medical literature is valued almost exclusively for its content of truth, of fact and of motive. While the literature of a people must be expressed in an idiomatic vernacular, the literature of medicine is confined to no fixed form of expression, to no language and to no restraints, except that of veracity and courtesy. In the republic of science there are no precedences, no authorities. The courts of science try all things and hold fast only that which can be demonstrated *ad libitum*. The witnesses in her courts, regardless of age, sex or color stand with equal credit at the dock and the only advocate and attorney is time.⁴ The records of this court make up the lasting portion of medical literature. This literature is to be found in journals, books, encyclopædiæ and these are in the medical libraries.

The most exhaustive modern bibliography of medicine is the *Index-Catalogue of the Library of the Surgeon-General's Office* of the United States Army. This is a monumental index of practically all the literature in medicine and was originally compiled by Dr. John S. Billings (1838-1913).

The "Index Catalogue" has been issued in forty-seven volumes (1880-1932), in three series. The last volume, published in 1932,

⁴ Holmes, B.: Relation of Medical Literature to Professional Esteem, *Lancet-Clinic*, Cincin., 114: 222, 1915.

covered "Sympathectomy to Zymologica." The next volume will begin the fourth series and will no doubt cover the first letter of the alphabet or the first two letters and will supplement the preceding volume covering the same letters of the third series bringing the index down to 1932 for these subjects. Material for this volume has been prepared and will be published as soon as funds are made available by Congress. It would be hard to exaggerate the value of this catalogue which represents all the literature up to 1926 stored in the Army Medical Library in Washington, D. C. The catalogue is one of the principal agents in the standardization of medical records, insuring that published work shall not be overlooked by later authors. The orderly arrangement of the index is in itself a work of genius and has formed a model for other medical libraries all over the world. The Army Medical Library contains 889,675 volumes and acts as a clearing house for the needs of the medical libraries of the country. Although the Baltimore doctor is particularly fortunate to have the resources of the Welch Library at the Johns Hopkins, the Library of the Medical and Chirurgical Faculty of Maryland, and the Library of the School of Medicine of the University of Maryland, resort must occasionally be made to inter-library loans from the Army Medical Library.

An even more generally useful index is the *Index-Medicus*, first series of which was published monthly from 1879-99; the second series of which was published monthly from 1903-20; the third series of which was published quarterly from 1921-1926. The hiatus caused by this suspension of publication of the *Index-Medicus* was filled in part by the French "Bibliographia Medica," published in Paris from 1900 to 1902.⁵ In 1927 the *Index Medicus*, published since 1879 under various auspices, and the "Quarterly Cumulative Index," published since 1916 by the American Medical Association, combined as the *Quarterly Cumulative Index Medicus*. This index, in two bound volumes for each year, is now published by the American Medical Association in co-operation with the Army Medical Library and is aided financially by the Carnegie Institution. The extensive bibliographic material available in the Library of the Surgeon-General's Office in Washington, including practically the entire medical literature of the world is now covered by the *Quarterly Cumulative Index Medicus*.

The average practitioner usually resorts to the last volume of the *Quarterly Cumulative Index Medicus* for desired information and he will seldom search further back than five years in these volumes. He feels confident that the latest methods of treatment and findings on the problem he is interested in have been reviewed within the last five

⁵ Garrison, F. H.: History of Medicine, 4th Ed, W. B. Saunders, Phila., 1929.

years and that the recent writers have reviewed the earlier works. Since the latest "Index Medicus," is usually from two to four months behind the current journals, the researcher or investigator consults the weekly *Journal of the American Medical Association* for the very latest references. This journal contains a "Guide to Current Medical Literature," as well as an index and abstract of the current literature of every important journal. The surgeon looks to the monthly *Surgery, Gynecology and Obstetrics*, which carries a "Bibliography of Current Literature," particularly pertaining to the three specialties for which the publication is named, also *International Abstract of Surgery*, carried as a supplement to this journal.

In the fields of laboratory, clinical and therapeutic research, workers are almost daily reaching and recording solutions. Their results are recorded in countless journals in all languages. Busy practitioners with insistent demands upon their time have little opportunity to select from this mountain of literature and often do not have the facility in translation of such literature in other tongues as is essential to familiarity with the trend of contemporary medical thought, therefore, several publications have appeared to present the new ideas in condensed form. Probably the best among these are the *International Medical Digest*, and *International Surgical Digest*.⁶ These are monthly publications and contain brief abstracts of the most important recent papers. The single numbers are filed in loose-leaf binders and a cumulative index is issued with each number. Nelson's *Surveys of Current Literature* in Surgery and in Medicine,⁷ published monthly usually, are the résumés by specialists of the entire recent literature on a single topic. The *Current Medical Digest*,⁸ which has just been started with the October issue, is a monthly periodical similar in nature to the *International Medical Digest*.

Many subjects cannot be presented in the abbreviated form necessary to periodical publication. Books are therefore necessary, and such books as confine themselves to one topic, be they large or small, thin or thick, are termed "monographs." They are by all odds, the most substantial portion of medical literature. They are the very skeleton on which serial literature hangs. Books and monographs are continually being published and re-published to include the latest discoveries. The wide varieties of text-books are to be found in most libraries usually upon the plan of the Boston Medical Library in sections on the biological sciences, practice of medicine, pathology, bacteriology,

⁶ W. F. Prior Co., Inc., Hagerstown, Md.

⁷ Thomas Nelson & Sons, New York.

⁸ The Mitchell Corporation, Hagerstown, Md.

therapeutics, surgery, pediatrics, and other divisions, making any given field quickly accessible to the patron.

But medicine is in a state of continual growth and the task of recording it is never done. The most authoritative text books may be obsolete within a year. In order to give the physician and surgeon a more comprehensive and constantly up-to-date body of information, various encyclopedic systems have therefore arisen. These are resorted to for quick and authoritative reference. The systems usually cover all the topics of medicine or surgery and each subject is written by a specialist in that field. As new developments are noted, the new work is sent to subscribers, the old pages removed from the volumes and the new pages carrying the later material are inserted. The better known systems are *Nelson Loose-Leaf Living Medicine*, and *Nelson Loose-Leaf Living Surgery*, both seven-volume works; *Oxford Medicine*, in six volumes, edited by Henry A. Christian; *Oxford Loose-Leaf Surgery*, in five volumes, edited by Burghard and Kanaval;⁹ *The Practice of Medicine*, in ten volumes, edited by Frederick Tice, and the *Practice of Surgery*, in twelve volumes, edited by Dean Lewis.¹⁰ By these various means the active follower of Hippocrates keeps pace.

SAMUEL H. FELDSTEIN,
*Assistant Librarian, School, of Medicine,
University of Maryland*

⁹ Oxford University Press, New York.

¹⁰ W. F. Prior Co., Inc., Hagerstown, Md.

THE ENDOWMENTS FUNDS

The Board of Trustees of the Endowment Funds reports for the fiscal year ending December 31, 1933, as follows:

	<i>Invested</i>	<i>Cash</i>	<i>Total</i>
L. S. Ashman Fund.....	—	\$201.92	\$201.92
Burt J. Asper Fund.....	—	284.57	284.57
Caroline Dorsey Coale Fund.....	\$2,250.00	170.47	2,420.47
Israel & Cecelia Cohen Fund.....	4,920.14	401.13	5,321.27
D. A. R. Fund.....	900.62	1,030.66	1,931.22
Dental Fund.....	—	38.23	38.23
German H. H. Emory Fund.....	—	678.68	678.68
Faculty of Physic Fund.....	59,592.01	2,211.58	61,803.59
Leon Frank Fund.....	2,466.56	401.70	2,868.26
Charles Frick Research Fund.....	500.00	1,008.11	1,508.11
Julius Friedenwald Fund.....	11,978.29	768.86	12,747.15
A. Bradley Gaither Fund.....	—	583.83	583.83
General Endowment Fund.....	21,183.54	1,021.46	22,205.00
Katherine Gibson Fund.....	3,400.62	431.39	3,832.01
J. C. Hemmeter Fund.....	11,520.49	237.77	11,758.26
Charles M. Hitchcock Fund.....	5,000.00	291.82	5,291.82
Joseph W. Holland Fund.....	—	15.06	15.06
Leo Karlinsky Fund.....	3,000.00	406.43	3,406.43
Law Fund.....	—	271.81	271.81
Pharmacy Fund.....	—	73.22	73.22
J. M. H. Rowland Fund.....	6,469.57	539.89	7,009.46
David Streett Fund.....	350.00	819.07	1,169.07
John F. B. Weaver Fund.....	82,635.00	3,035.57	85,668.57
Randolph Winslow Fund.....	2,500.00	80.12	2,588.12
E. and L. M. Zimmerman Fund.....	1,003.67	32.64	1,036.11
	<u>\$219,670.31</u>	<u>\$15,041.99</u>	<u>\$234,712.30</u>
Total of all funds December 31, 1933.....		\$234,712.30	
Total of all funds December 31, 1932.....		229,520.39	
Increase for 1933.....			\$5,191.91

Those interested in the financial progress of the University will be pleased to learn that in spite of the depression these funds show a slight increase over the statement of last year. Again we take this occasion to impress upon our friends, well-wishers and alumni that no university can carry on without resources other than the income derived from its tuition fees. An adequate endowment is, therefore, necessary to meet this deficit. In this connection, we desire to reiterate that any assistance, be it small or large, will be greatly appreciated by the University authorities.

Contributions, bequests and donations, if intended for the School

of Medicine, may be given to the general medical fund or to a special purpose, such as library, hospital, publication, scholarship, student loan, research, fellowship, or to any other object the devisor desires. Any money so given, is placed in the permanent funds and is administered by the Board of Trustees of the Endowment Funds, a body incorporated by the State of Maryland and independent of the Faculty of Physic. This proviso assures the donor that the corpus of his gift will be preserved and that his wishes will be strictly observed, for not even the interest can be spent without the consent of the Board of Trustees.

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The names listed above are officers for the term beginning July 1, 1934, and ending June 30, 1935.

MARYLAND ALUMNI IN MASSACHUSETTS HOLD LUNCHEON-MEETING

Under the sponsorship of a local committee of Worcester graduates of the University of Maryland Medical School, Baltimore Medical College, and College of Physicians and Surgeons, respectively, a Luncheon-meeting was held at the Hotel Bancroft, Worcester on June 5th. This was the first meeting of Massachusetts Alumni of these three schools held since the World War. Letters were sent to more than 200 graduates now practising or living in the state. Almost 100 of them replied, expressing their intention or inability to join their fellow-alumni at this meeting. Approximately, fifty men were present. Of these, nine were U. of M. graduates, twenty-four graduated from Baltimore Medical College, and fifteen from P. & S. The Worcester Committee consisted of W. B. Davidson (U. of M. 1917), W. E. Dolan (B. M. C. 1902), and E. P. Disbrow (P. & S. 1908).

At the close of the luncheon, it was moved and voted that officers be elected and plans laid for another meeting next year. Since this meeting had been called for the second day of the Annual Meeting of the Massachusetts Medical Society, to which most of the men belong, it was deemed advisable to hold the next meeting on the same annual basis in Boston. The sum of \$50.00 was raised by individual con-

tributions of \$1.00 from each alumnus present, this to defray the incidental costs of the present meeting and the coming 1935 get-together.

The following officers were elected to serve until the next meeting:

President—W. B. Davidson (U. of M. 1917), 36 Pleasant St. Worcester.

First Vice-President—A. C. Lewis (P. and S. 1893), 1022 N. Main St. Fall River.

Second Vice-President—W. E. Dolan (B. M. C. 1902), 390 Main St. Worcester.

Secretary—Charles E. Gill (U. of M. 1927), Room 519; State House, Boston.

Treasurer—Edson W. Glidden (U. of M. 1907), Worcester County Sanatorium.

Those present were as follows

<i>Name</i>	<i>Place</i>	<i>School</i>	<i>Year</i>
W. B. Davidson.....	Worcester	U. of M.	1917
E. P. Disbrow.....	Worcester	P. & S.	1908
W. E. Dolan.....	Worcester	B. M. C.	1902
J. W. Ledbury, Jr.....	Uxbridge	P. & S.	1905
E. W. Barry.....	Whitinsville	P. & S.	1897
M. F. Hosmer.....	Springfield	P. & S.	1914
J. R. Agnew.....	Springfield	U. of M.	1914
J. H. C. Gallagher.....	Springfield	B. M. C.	1903
W. C. Haviland.....	Worcester	B. M. C.	1904
George E. McPherson.....	Belchertown	B. M. C.	1904
L. F. Playse.....	Hopkinton	B. M. C.	1906
Harvey A. Kelly.....	Winthrop	B. M. C.	1906
Andrew H. Fuller.....	West Upton	B. M. C.	1906
M. W. Harrington.....	Indian Orchard	B. M. C.	1901
Harry F. Byrnes.....	Springfield	B. M. C.	1904
John H. Weller.....	State Farm, Bridgewater	P. & S.	1909
Alfred Elliot.....	Middleboro	P. & S.	1900
A. H. Lancaster.....	Worcester	P. & S.	1903
A. C. Lewis.....	Fall River	P. & S.	1893
John W. Leonard.....	Fall River	P. & S.	1900
Archibald St. George.....	Fall River	P. & S.	1895
J. Edmund Brown.....	Bryantville	P. & S.	1886
Allen H. Wright.....	Northfield	U. of M.	1906
Louis H. Limauro.....	Lynn	U. of M.	1906
Hector J. MacLean.....	Boston	B. M. C.	1908
F. A. Edmunds.....	Woburn	B. M. C.	1903
W. H. Blanchette.....	Fall River	B. M. C.	1896
David G. Underwood.....	Hingham	B. M. C.	1894
M. P. Stanley.....	Northboro	B. M. C.	1895
J. C. Austin.....	Spencer	P. & S.	1896
J. F. Cuddy.....	Athol	B. M. C.	1905
F. A. Reynolds.....	Athol	U. of M.	1921
John J. Hayden.....	Worcester	B. M. C.	1908
John J. Quinn.....	East Douglas	B. M. C.	1903
V. A. Navarro.....	Medfield	U. of M.	1925
W. E. McLellan.....	Medfield	U. of M.	1914
C. J. Walsh.....	Arlington	P. & S.	1892

<i>Name</i>	<i>Place</i>	<i>School</i>	<i>Year</i>
Charles W. Finnerty.....	Boston	P. & S.	1913
B. P. Sweeney.....	Leominster	B. M. C.	1911
M. H. Crystal.....	Leominster	B. M. C.	1901
J. H. Kearney.....	Fitchburg	P. & S.	1898
Joseph A. Barre.....	Fall River	P. & S.	1892
Edson W. Glidden.....	West Boylston	U. of M.	1907
P. A. S. Grady.....	Clinton	B. M. C.	1897
George Webster.....	Southbridge	B. M. C.	1900
H. A. Dunphy.....	Palmer	B. M. C.	1908
Benj. Parvey.....	Boston	B. M. C.	1907
Charles E. Gill.....	Boston	U. of M.	1927

ITEMS

Dr. Frank L. Lynn, Baltimore, Md.; class of 1907; professor of clinical surgery at his alma mater; has had two signal honors conferred upon him during the past year, viz.: election to membership in the American Surgical Association and the Southern Surgical Society.

Dr. Newdigate M. Owensby, Atlanta, Ga.; class of 1904; has been appointed visiting professor of psychiatry at the University of Georgia Medical School, Augusta, Ga.

Dr. Ernest H. Gaither, Baltimore, Md., B. M. C., class of 1905; is chairman of the section on gastroenterology of the Southern Medical Association.

Dr. Henry F. Hill, Baltimore, Md., class of 1877, is a patient in the University Hospital. He is suffering with a compound fracture of the leg incurred by being run into by an automobile.

Dr. William S. Love, Jr., Baltimore, Md., class of 1922, read a paper on "Congenital Heart Disease" at the regular monthly meeting of the University Hospital Medical Staff, May 21, 1934. The paper was discussed by Dr. Carl L. Davis, professor of anatomy, University of Maryland, School of Medicine.

Dr. Arthur M. Shipley, Baltimore, Md., class of 1902, professor of surgery, University of Maryland, is on a tour of Norway and Sweden.

Dr. William H. Smith, Baltimore, Md., class of 1900, associate professor of clinical medicine at his alma mater, has resumed his practice after a three weeks' sojourn at Ocean City, Md.

Dr. Charles A. Reifschneider, Baltimore, Md., class of 1916, has been advanced to the rank of associate professor of surgery and oral surgery, University of Maryland, School of Medicine.

The new University Hospital is to be opened for the reception of patients about October 15, 1934. This is good news.

Dr. William Wallace Walker, Baltimore, Md., class of 1923, has been advanced to the rank of instructor in surgery at the University of Maryland, School of Medicine.

Dr. Page Edmunds, Baltimore, Md., class of 1898, professor of traumatic surgery, at the University of Maryland, School of Medicine, spent his summer vacation at Gibson Island, Md.

Dr. Robert P. Bay, Baltimore, Md., class of 1905, professor of oral surgery in the School of Medicine, University of Maryland, spent his summer vacation at Ocean City, Md.

Dr. G. Carroll Lockard, Baltimore, Md., class of 1903, professor of clinical medicine in the Medical School of the University of Maryland, is chairman of the library committee.

Dr. Sherman R. Wantz, Baltimore, Md., B. M. C., class of 1898, is president of the Baltimore County Medical Association.

Dr. Randolph Winslow, Baltimore, Md., class of 1873, professor emeritus of surgery at the School of Medicine, University of Maryland, will celebrate his eighty-second birthday on October 23, 1934.

WEDDING

Dr. G. A. Davis, Summit Point, W. Va.; P. and S., class of 1880; surgeon to the Baltimore and Ohio Railroad and a retired practitioner of medicine; was married, August 15, 1934, to Mrs. E. Virginia Hawkins, of Richmond, Va. Dr. and Mrs. Davis will make their home at "The Gables," Summit Point, W. Va.

DEATHS

- DR. JOSEPH HENRY BRANHAM, Baltimore, Md., P. & S., class 1879; formerly professor of clinical surgery at his alma mater; aged 77; died, August 19, 1934, of bronchopneumonia. He was born in Walker County, Georgia, May 7, 1857, and was educated at Chatata Academy, Tenn. During his active career, he held the following positions: Resident physician, Maternite and City Hospital; demonstrator of anatomy, professor of obstetrics and associate professor of anatomy, College of Physicians and Surgeons, 1881-1895; professor of clinical and operative surgery, Baltimore University, 1896-1897; professor of obstetrics and clinical gynecology, Baltimore University, 1897-1898; professor of surgery and abdominal surgery, Maryland Medical College, 1898 until the closure of that institution when he was appointed professor of clinical surgery in the Faculty of Physic, University of Maryland. He was regarded as a good teacher and a successful surgeon.
- DR. THOMAS J. WOLFE, Bowie, Md.; B. M. C., class of 1890; served during the World War; aged 71; died, in April, 1934.
- DR. ROBERT J. HILLIS, Altoona, Pa.; P. & S., class of 1886; aged 71; died, February 25, 1934.
- DR. ALBERT J. HOSKINS, Albuquerque, N. M.; P. & S., class of 1904; commissioned in the U. S. Army in 1911 and resigned in 1917, commissioned in the U. S. Public Health Service in 1917; aged 58; medical officer to the U. S. Veterans' Administration Hospital; died, April 28, 1934, of cerebral hemorrhage.
- DR. THOMAS HUSTON SMITH, Burnham, Pa.; B. M. C., class of 1897; past president of the Mifflin County Medical Society; aged 63; died, March 20, 1934, of cerebral hemorrhage.
- DR. JOSEPH L. SPRUILL, Jamestown, N. C.; class of 1895; past president of the Seaboard Medical Association and of the Guilford County Medical Society; aged 63; medical superintendent of the Guilford County Tuberculosis Sanatorium; died, May 5, 1934, of carcinoma of the bladder with metastasis.
- DR. ELI CRAWFORD BOYETTE, Charlotte, N. C.; B. M. C., class of 1893; veteran of the Spanish American War; aged 66; died, May 13, 1934, of chronic pulmonary tuberculosis.
- DR. CHARLES HENRY HALL, MONROE, N. Y.; P. & S., class of 1891; aged 72; died, April 19, 1934, of chronic myocarditis and arteriosclerosis.
- DR. ST. CLAIR STREETT, Kansas City, Mo.; class of 1880; aged 64; died, June 27, 1934, of cerebral hemorrhage and arteriosclerosis. He was born in Harford County, Maryland, and was the son of John Rush Streett.
- DR. CHARLES MOORE STRONG, Charlotte, N. C.; class of 1888; past president of the Mecklinburg County Medical Society; fellow of the American College of Surgeons; aged 72; died, June 14, 1934, of cardiac disease.
- DR. WILLIAM G. SHAW, Wagram, N. C.; P. & S., class of 1892; past president of the Scotland County Medical Society; for many years member of the county board of education; aged 66; died, June 11, 1934.
- DR. HARRY WHIPPLE JOHNSON, Bangor, Me.; P. & S., class of 1908; aged 54; died, April 16, 1934, of septicemia, acute nephritis and empyema of the gall bladder.
- DR. ISAAC CALVIN HOLLINGER, Boonville, Ind.; P. & S., class of 1882; served during the World War; aged 79; died, June 14, 1934, of cerebral hemorrhage.
- DR. CHARLES LEE AUSTIN, Norman, Okla.; class of 1882; aged 73; died, May 5 1934, of myocarditis following a prostatectomy.
- DR. LOUIS IGNATIUS TURNER, Baltimore, Md.; class of 1877; aged 77; died, May 9, 1934, of lobar pneumonia and myocarditis.
- DR. PINKNEY LEE DAVIS, Baltimore, Md.; class of 1888; police surgeon; served during the World War as a Captain in the M. C. of the U. S. Army; aged 74; died, July 10, 1934, of a self-inflicted bullet wound.
- DR. LOUIS B. BURLESON, Cabarrus, N. C.; class of 1891; aged 66; died, June 24, 1934, of pneumonia.
- DR. J. W. JOHNSON, Kingsburg, S. C.; B. M. C., class of 1892; aged 61; died, June 29, 1934, of cardiac disease.
- DR. SAMUEL KEMP MERRICK, Baltimore, Md.; Class of 1872; professor emeritus of rhinology and laryngology at his alma mater; aged 86; died, July 24, 1934.

The son of Samuel Beal and Annie Jane Seymour Merrick, Samuel Kemp Merrick was born near Trappe, Talbot county, August 22, 1848. He was a member of an old Maryland family, his paternal ancestors having settled in the State in 1687. Samuel Kemp Merrick received his early education in the public and private schools of Talbot county; then he studied medicine at the University of Maryland, graduating in 1872. The following year he began the general practice of medicine in Baltimore, later specializing in diseases of the nose, throat and chest. In 1883 he became professor of diseases of the nose, throat and chest at the Baltimore Medical College. Dr. Merrick was active in the merger of the Baltimore Medical College with the University of Maryland and became a member of the board of regents of the University and professor of diseases of the nose and throat. He retained these positions with the university until its consolidation with the Maryland State College of Agriculture, when he was made professor emeritus of diseases of the nose and throat. He organized the dental department of the Baltimore Medical College and was instrumental in the founding of the Maryland General Hospital, being a charter member of the hospital's board of governors. Dr. Merrick was a member and past president of the Baltimore City Medical Society, a fellow of the American College of Surgeons, the oldest living member of the Medical and Chirurgical Faculty of Maryland.

- DR. WILLIAM ANDREW NIELD, New Bedford, Mass.; B. M. C., class of 1902; aged 59; died, June 12, 1934, of cardiac thrombosis. As a mark of respect and tribute to the memory of Dr. Nield, the Board of Directors of the Sol-E-Mar Hospital at a recent meeting passed the following resolution:

"Dr. William A. Nield, who died June 12th last, was one of the original members of the Board of Managers of Sol-E-Mar. He had been Medical Director of the Hospital since its inception, and because of his association in the operation of the Fresh Air Camp for Children, from which Sol-E-Mar developed, may be said to have been one of the real founders of the Institution.

"Deeply interested in all that affected the Hospital, Dr. Nield gave unstintingly of his time, not only as Medical Director but as a member of this Board. The patients have gained the benefit of his unceasing efforts for their well-being, and the Board of Managers has confidently relied on his ability and his devotion to the Institution.

"This Board, therefore, expresses by this record, its deep sense of loss and its appreciation of the inestimable value of his services to Sol-E-Mar."

- DR. DAVID A. HUTCHINSON, Nashville, Ark.; P. & S., class of 1880; past president and secretary of the Howard County Medical Society; past president of the county board of health; formerly mayor of Nashville; aged 85; died, May 27, 1934, of senility.
- DR. ROSCIE E. SCHINDEL, Omaha, Neb.; B. M. C., class of 1897; formerly professor of diseases of the stomach, John A. Creighton Medical College; aged 63; died, June 15, 1934, of angina pectoris.
- DR. WILLIAM FERGUSON TORBITT, Bennett, Neb.; class of 1903; also a druggist; aged 80; died, May 13, 1934.
- DR. JEREMIAH FRANCIS CROWLEY, Adams, Mass.; B. M. C., class of 1894; aged 62; died, July 4, 1934, of illuminating gas poisoning, self-administered.
- DR. KIM DEVAL CURTIS, Phoenix, Ariz.; B. M. C., class of 1907; on the staff of the Arizona State Hospital; aged 49; died, June 1, 1934, of cerebral hemorrhage.
- DR. LESTER HALL HUMMEL, Salem, N. J.; B. M. C., class of 1897; member of the board of education and board of health; died, June 7, 1934, of myocarditis and cerebral hemorrhage.
- DR. WILLIAM, A. JOHNSTON, Roanoke, Va.; P. & S., class of 1881; aged 71; died, May 30, 1934, of carcinoma of the stomach.
- DR. WALTER B. FOSS, Ashley, Pa.; P. & S., class of 1887; for many years bank president and member of the board of health of Ashley; aged 74; died, May 6, 1934, following an operation.
- DR. JOHN HODGEN BURKHEAD, Middleboro, Mass.; P. & S., class of 1907; aged 53; died, May 13, 1934, of cholangitis and embolism.
- DR. JOHN E. STAFFORD, STAMFORD, N. Y.; P. & S., class of 1895; formerly secretary of the Delaware County Medical Society; at one time medical superintendent of the Stamford Hospital; aged 72; died, May 12, 1934, of cardiac disease.
- DR. JOHN ALBERT KIMZEY, Detroit, Mich., P. & S., class of 1910; veteran of the Spanish-American War; aged 57; died, July 23, 1934, of coronary thrombosis. He was a brother of Dr. Fritz J. Kimzey, of Baltimore, Md., P. & S., class of 1912. He at one time was a resident physician at the Mercy Hospital.

- DR. SAMUEL P. DEEM, Rutland, Ohio; B. M. C., class of 1893; aged 70; died, July 5, 1934, of angina pectoris.
- DR. CHARLES DEEMS BELL, Wilmington, N. C.; class of 1883; aged 76; died, June 17, 1934, of coronary thrombosis.
- DR. LOUIE ELSWORTH LANGLEY, Williamsport, Pa.; class of 1910; aged 49; died, May 31, 1934.
- DR. CLARENCE L. PEARSON, Newton, Mass.; class of 1883; aged 74; died, September 8, 1934, of chronic cardiac disease. He was a son of Samuel and Sarah (Pell) Pearson, of Lincoln, Ill.

CONSULTATION CLINIC IN OBSTETRICS

The Department of Obstetrics desires to announce the establishment at the University Hospital of a "Consultation Clinic" for the study of obstetrical problems among patients in the lower economic scale.

It is felt that many physicians of the State have obstetrical patients about whom they would like to have advice, but hesitate to ask for it because of the patient's financial status, the patient being unable to pay an ordinary consultation fee. It is for this type of patient only that the clinic will be operated. No charge will be made for the consultation itself and in the majority of cases the procedure will be without cost to the patient, but necessary laboratory and X-ray examinations will carry a minimum charge, which in no case should be a great burden upon the patient's finances.

It is not the aim of the clinic to treat patients (and none will be accepted for treatment), but to help the attending physician in his conduct of the case. No patient will be accepted unless accompanied by her physician or if this is impossible, a letter from him stating that the patient is unable to pay an ordinary consultation fee. If the physician does not accompany the patient, a report of the findings will be sent him.

The Clinic will be open after October 1, 1934 on Wednesday and Friday afternoons, on which days patients will be seen by appointment made by the patient's physician. It is the desire of the Staff of the Clinic to accommodate itself whenever possible to the convenience of the physician.

It is hoped that every physician in the State will feel free to avail himself of the facilities of the Clinic and to bring or send any patient about whom he desires advice.

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PRIMARY CARCINOMA OF THE LUNG

REPORT OF 11 CASES WITH A STUDY OF THE PATHOLOGY¹

By C. GARDNER WARNER, M.D.

The first description of primary carcinoma of the lung is attributed to Bayle (1) in 1810. Stokes (1) in 1842 recognized several varieties of this disease. Ebermann (1) as early as 1857 collected 72 cases, one occurring before the age of 9 years. Jaccoud (1) appears first to have clinically distinguished the disease from phthisis. Rokitansky (1) recognized several gross varieties of the pulmonary lesions, but the earliest microscopical studies were those of Langhans, Marchiafava and Malassez (1) in 1871-1876. The accurate and detailed data of Wolf (1) in 1895 and Passler (1) in 1896 have been the chief source of our early knowledge on this subject. In 1911, Adler (2) was able to tabulate 374 cases and this monograph has served as a basis for subsequent study. It is in the last two decades that this condition has become more generally recognized. The extensive review of this disease by Fried (3) in 1931 is the source of much of the information in this article. He states that the cases reported in Germany alone number many thousands. It is apparent in the literature that the disease is recognized more generally abroad than in this country.

The increasing incidence of primary carcinoma of the lung is apparent to every student and practitioner of medicine. The current literature is constantly adding to the rapidly accumulating number of reported cases. At almost every symposium or clinic in which diseases of the chest are discussed, this condition receives considerable attention since it is an interesting entity both from clinical and pathological standpoints. The increasing frequency of occurrence of primary

¹ From the Department of Pathology, School of Medicine, University of Maryland.

malignancy of the lung was forcibly brought to the attention of this department by five such autopsies within a period of six months. Six other cases were found in the records of this department in a short series of 1100 autopsies. It is thought advisable to bring together these 11 cases for pathological study.

CASE REPORTS

Case 1. White male, age 40.

Complaint: Spitting of blood and pain in the right lower chest.

History: Indefinite digestive disturbances with flatulence and pain in the upper right quadrant of the abdomen had been present for the past two years. Appendectomy was performed in July, 1922 and a tonsillectomy in September, 1922, from which time he dated his present illness. Ten days following this operation he developed cough and hemoptysis with progressive thoracic pain. He was hospitalized in February, 1923. Physical signs and X-ray findings of consolidation in the mid-portion of the right lung were present. There was moderate anemia with 50% hemoglobin content; a septic temperature; increasing hemoptysis and foul expectoration, with death by pulmonary hemorrhage.

Clinical diagnosis: Abscess right lung.

Autopsy findings: Bronchogenic carcinoma, squamous cell type, wall of right bronchus with extension into lower lobe, right lung; massive abscess, upper portion lower lobe, right lung, with extension through pleura; metastatic carcinoma, bodies 6, 7, and 8th dorsal vertebrae, and 6, 7, 8th right ribs; hemorrhage into abscess cavity.

Case 2. White male, age 54.

Complaint: Shortness of breath, puffiness of face, chest and upper extremities.

History: Family and past history negative. In December, 1928, he began to notice pain in the right axillary space. This was followed by progressive dyspnea, brassy change in the voice and a paroxysmal, non-productive cough. From January, 1930, he noticed a swelling of the face and neck which gradually became worse. He also experienced some difficulty in swallowing. Physical signs and X-ray examination revealed a mass in the mediastinum and right upper chest. Bronchoscopy and biopsy of cervical glands were attempted without success because of the extreme engorgement of the vessels.

Clinical diagnosis: Mediastinal tumor, probably lymphosarcoma.

Autopsy findings: Bronchogenic carcinoma, small cell type, right lung, with extension into mediastinum and cervical glands; bronchiectasis and multiple abscesses right lung.

Case 3. White male, age 47.

Complaint: Pain in epigastrium.

History: Patient had influenza in 1918 and recurrent bronchitis every fall. His present illness consisted of severe pain in the epigastrium and progressive loss of weight. Gastric analysis showed an absence of free hydrochloric acid. A gastrointestinal series was negative. X-ray examination of the chest showed some increase in the root shadows and thickening of the bronchi, especially those in the right upper lobe. This was thought to be tuberculous in origin. Biopsy of a gland from the left axilla showed only an hyperplasia. Progressive anemia with intermittent fever continued to a fatal termination.

Clinical diagnosis: Carcinoma of stomach or Hodgkins disease.

Autopsy findings: Bronchogenic carcinoma, small cell type, hylus of right lung, with involvement of mediastinal glands; metastatic nodules, lung right, liver, spleen, pancreas, right adrenal, and kidneys.

Case 4. White male, age 41.

Complaint: Pain in left leg.

History: Patient complained of pain of increasing intensity in the left leg for two months, resulting in inability to walk. There was a history of antiluetic treatment. The Wassermann test was positive. X-ray of the left femur showed a pathological fracture. There was also decalcification and destruction of a portion of the outer table of the skull. These changes were attributed to syphilitic osteitis.

Clinical diagnosis: Tertiary syphilis.

Autopsy findings: Bronchogenic carcinoma, small cell type, right lung with necrosis in tumor and adjacent lung tissue; metastases to right hylic and subpleural lymph nodes; liver; kidneys; left lung; left femur; skull (?); syphilitic mesaortitis; stenosis of right coronary ostium.

Case 5. White male, age 57.

Complaint: Constricting sensation in lower left chest with shortness of breath.

History: Past history negative except for "inflammatory rheumatism" at 12 years of age. He dated his present illness from an attack of pneumonia and pleurisy, one year previously. This illness was followed by a cough, productive of a thick mucoid sputum, occasionally blood streaked. He spent 6 months in a sanitarium for tuberculosis, where both physical signs and X-ray examination showed an extensive process in the lower half of the right lung. Bronchoscopy and biopsy showed this process to be carcinoma. Biopsy of a superficial nodule on the scalp showed a neurofibroma. The patient's rapid downhill course was apparently more the result of the heavy infection in the base of the lung, than the carcinoma.

Clinical diagnosis: Carcinoma and tuberculosis.

Autopsy findings: Bronchogenic carcinoma, squamous cell type of right bronchus; regional metastases, hylic nodes; metastatic nodules, liver, spleen; malignant implant right pleura; ulceration and partial obstruction of right bronchus; bronchiectasis; pneumonia, abscess formation, right; caseous tuberculosis of right upper and middle lobes.

Case 6. White male, age 52.

Complaint: Pain in right axilla, loss of weight.

History: The patient had a definite family history of tuberculosis. His present illness extended over a period of 6 months. This consisted of pain in the right axillary space, fever, cough and intermittent hemoptysis. Physical examination and X-ray revealed increased density in the mediastinum and lower right chest. A pathological fracture at the upper third of the shaft of the right femur occurred in the hospital.

Clinical diagnosis: Bronchogenic carcinoma. This was confirmed by bronchoscopy and biopsy.

Autopsy findings: Bronchogenic carcinoma, small cell type, right lung, with extensive mediastinal invasion; obstruction of bronchi to right middle and lower lobes; multiple bronchiectatic abscesses in right lung; metastatic nodules in both adrenals, mesentery of sigmoid, and shaft of right femur which had suffered a pathological fracture.

Case 7. White male, age 46.

Complaint: Cold, followed by cough, fever and loss of weight.

History: A diagnosis of carcinoma of the bronchus was made by bronchoscopy with biopsy in August, 1932, at Sinai Hospital, Baltimore, Md. The patient was admitted to the University Hospital in April, 1933, because of progressive loss of weight and strength and several painful lumps on the scalp. These were removed and proved to be metastatic nodules. Physical signs and X-ray examination showed changes in the base of the right lung. The patient's course was rapidly downhill with persistent cough, fever and cachexia.

Clinical diagnosis: Primary carcinoma of the right lung.

Autopsy findings: Bronchogenic carcinoma of right lung, small cell type, atelectasis, right lower lobe with bronchiectatic abscesses; multiple metastatic nodules in left lung, mediastinum, liver, spleen, pancreas, adrenals, kidneys, dura, cerebellum and skin; amyloidosis of spleen and kidneys.

Case 8. White male, age 58.

Complaint: Pain in the chest.

History: His present illness began with pain in the left chest and an irritative cough, occasionally productive of a mucoid or blood-streaked sputum. These symptoms were of two months' duration. Physical and X-ray examinations showed the presence of a lesion in the left upper chest. During his stay in the hospital an effusion developed in this side of the chest. There was also air in the pleural space and it was thought that a broncho-pleural fistula had resulted from erosion by the malignant growth.

Clinical diagnosis: Primary carcinoma of left bronchus.

Autopsy findings: Bronchogenic carcinoma, squamous cell type, with obstruction of bronchus to left upper lobe; broncho-pleural fistula; left pyothorax (1600 cc. fluid); partial obstruction of bronchus to right lower lobe with bronchiectasis.

Case 9. White male, age 66.

Complaint: Pain in the chest with cough and shortness of breath of 6 months' duration.

History: The patient's present illness began in April, 1931, with a severe cold. A dry, wheezing cough, non-productive at first, but later occasionally blood streaked sputum, followed this illness. By December, 1931, he had lost his appetite and dyspnea had supervened. He had lost 18 lbs. in weight. The roentgenologist at this time reported consolidation at the apex of the right lung and this was interpreted as an unresolved pneumonia. Physical examination showed varicosities over the chest; tracheal deviation to the right; impaired to flat note over the upper right chest with bronchial breathing. X-ray examination in March, 1932, revealed a dense central shadow on the right side with increased density in the right upper lobe. This was interpreted as a bronchogenic carcinoma with partial atelectasis of the right upper lobe.

Clinical diagnosis: Primary carcinoma of the right lung.

Autopsy findings: Bronchogenic carcinoma, small cell type, with obstruction of the bronchus to the right upper lobe; atelectasis and multiple abscesses, right upper lobe; metastases to hilar and mediastinal nodes, lungs, pleura; carcinomatous infiltration of pericardium and of heart; generalized arteriosclerosis.

Case 10. White male, age 50.

Complaint: Weakness and slight cough with progressive loss of weight.

History: The patient was a stone-cutter by occupation. He dated his present illness from a cold and cough which started 10 weeks before admission to the hospital. His cough became high pitched and brassy in character and productive of a whitish froth. During this period he had lost 25 lbs. in weight and had experienced intermittent shooting pains through the chest. Physical examination presented signs of atelectasis of the right lower lobe with probable bronchiectasis of the right middle and upper lobes. The veins in his right axilla were dilated. His course in the hospital was febrile, with attacks of diarrhea and progressive dyspnea.

Clinical diagnosis: Carcinoma of gastro-intestinal tract with metastases to the right lung; mediastinal Hodgkins disease was also considered.

Autopsy findings: Bronchogenic carcinoma, squamous cell type, with obstruction of the right bronchus and with extension to the mediastinal and supraclavicular lymph glands; bronchiectasis and abscesses of right lung; empyema of right pleura; purulent pericarditis.

Case 11. White male, age 40.

Complaint: Cough and pains in the back, left arm, and chest.

History: The patient's present illness began in the summer of 1933 with a non-productive cough which became quite chronic. In August of that year he was said to have had pneumonia and was advised to go away. In January, 1934, he was admitted to the hospital because of intermittent pain in his left arm and chest. Physical examination at this time revealed some dullness over the right lung and a slightly husky voice. A biopsy of cervical nodes revealed a metastatic carcinoma.

Clinical diagnosis: Carcinoma of the right lung with metastases to the glands of the neck.

Autopsy findings: Bronchogenic carcinoma, small cell type, right lung with extensive metastases to mediastinal, cervical and axillary nodes; metastases to skin over thorax, neck and shoulders; extreme edema of face, neck and legs; marked enlargement of gastric veins, with small rupture and intragastric hemorrhage; bilateral hydrothorax; emaciation.

PATHOLOGICAL STUDY

The older textbooks and earlier reports give the occurrence of primary carcinoma of the lung as 1.5 to 3 per cent of all carcinomas, whereas more recent reports vary this incidence from 5 to 10 per cent. This lesion comprised 1.5 per cent of 20,000 consecutive autopsies in Dresden, Germany from 1893 to 1927. In this country Barron (4) found 13 bronchogenic cancers in 4362 autopsies. Grove and Kramer (5) encountered 21 primary pulmonary tumors in 3659 post mortem examinations. Roshan (6), at the Boston City Hospital, reported 314 cases of carcinoma in 3004 autopsies. This is a 10.4 per cent incidence of carcinoma. In this same series primary carcinoma of the lung occurred 21 times, or an incidence 0.7 per cent of all necropsies. In the last 1100 autopsies from this department carcinoma occurred 102 times. It was primary in the lung in 9 instances. This is a 9.3

per cent incidence of carcinoma in this series, 0.8 per cent were primary in the lung.

Since 20 years have been added to the average expectancy of human life within the last 3 or 4 decades, and since this disease occurs chiefly in individuals above the age of 40, it is logical to assume that the population within the cancer age has been greatly increased. There has also been noted improvement in clinical and pathological methods of diagnosis. These two factors, together with the focusing of attention on this subject, have probably made the increase in primary carcinoma of the lung more apparent than real.

The age incidence of bronchogenic carcinoma is not unusual. It is the same as that of carcinoma elsewhere. Cases have been reported from 5 to 80 years of age. The majority of cases, however, occur between the ages of 40 and 60 years. The average age incidence in our series of 11 cases is 50 years.

As regards the sex incidence, every reported series shows a predominance of this disease in the male. The average ratio is about 4 to 1. The uneven distribution of this lesion between the two sexes is partly explained on the basis that the male sex is more exposed to pulmonary diseases in general and is, therefore, more prone to acquire a malignant disease of these organs.

The incidence as to seat shows that bronchogenic carcinoma more frequently occurs on the right than the left. This fact is attributed to the anatomic peculiarities of the right bronchus, which is shorter, wider and more a direct continuation of the trachea than the left, and therefore more exposed to penetration of foreign bodies and other exogenous material leading to irritation.

The etiology of carcinoma of the lung is of course unknown, but certain predisposing factors are recognized as often associated with it. Chronic irritation has been incriminated as a probable causative factor of carcinoma for the last decade. The respiratory tract is exceptionally open to physical and bacterial invasion from without. Inhalation of tobacco smoke has been suggested, as the disease is more prevalent in men, and as this sex is more addicted to this habit; however, no convincing statistics have been offered to substantiate the assumption that this physical factor has any etiological bearing on bronchogenic carcinoma. Likewise, exposure to coal tar products from macadamized roads, or exhaust gases from the increasing motorized traffic has been blamed without adequate proof.

The chronic irritation of the bronchial lining produced by bacteria undoubtedly plays a predisposing part. The apparent increase in this disease appears to have followed in the wake of the influenzal

epidemic of 1918-1919. A history of this disease is present in many of the cases of bronchogenic carcinoma. Chronic bronchitis is also claimed to be a predisposing factor. Histological study of these conditions in which a bronchial or peribronchial infection is prominent often shows ulceration and metaplasia of the bronchial epithelium. In one of the cases in this series a squamous cell carcinoma developed in the wall of an abscess cavity. The suggested association with tuberculosis has never been satisfactorily demonstrated.

The origin of the cells concerned in this malignant metaplasia has always been open to question. Virchow (7) first studied carcinoma from this aspect and was the author of the theory of "cancerization" of a somatic epithelial cell. According to more recent histogenetic concepts, however, a fully differentiated epithelial cell has not the power of regeneration, and therefore is "apotent" and unable to undergo a malignant metaplasia. The undifferentiated basal layer of the bronchial mucosa is normally the constant source of the more superficial columnar cell layers of the bronchial lining. It is from this layer that desquamated epithelium is replaced. As suggested above, a metaplasia of this columnar lining to squamous is sometimes seen in the presence of infection, so that it is probably the progenitor in malignant metamorphosis also.

The histologic classification of carcinoma of the lung has been most unsatisfactory, and until recently was dependent on the apparent source or origin of the growth. Squamous cell carcinomas were considered to arise from the bronchial lining; adenocarcinomas from the mucous glands; solid, small cell tumors or alveolar carcinomas from the alveolar lining cells. This latter source seems improbable since these cells are thought by many to be mesodermal in origin. Since mucous glands represent adult differentiated epithelium, and since by some such cells are considered incapable of reproducing themselves, this is a somewhat doubtful source of adenocarcinoma. It apparently falls to the undifferentiated basal layer or some progenitor of this tissue as the sole source of primary carcinoma of the lung.

GROSS PATHOLOGY

Several gross varieties of primary carcinoma of the lung have been observed in this series. The squamous cell type of carcinoma of the bronchus has been encountered four times. This growth usually appears in the large primary bronchi, often at a bifurcation and consists of an ulceration with cauliflower-like overgrown edges. There is usually necrosis and secondary infection and this is spread by aspiration to the more dependent portions of the lung. The growth itself

usually remains rather well circumscribed near the hylus of the lung. The secondary changes of necrosis, infection and aspiration are usually more prominent and more destructive than the malignant growth.

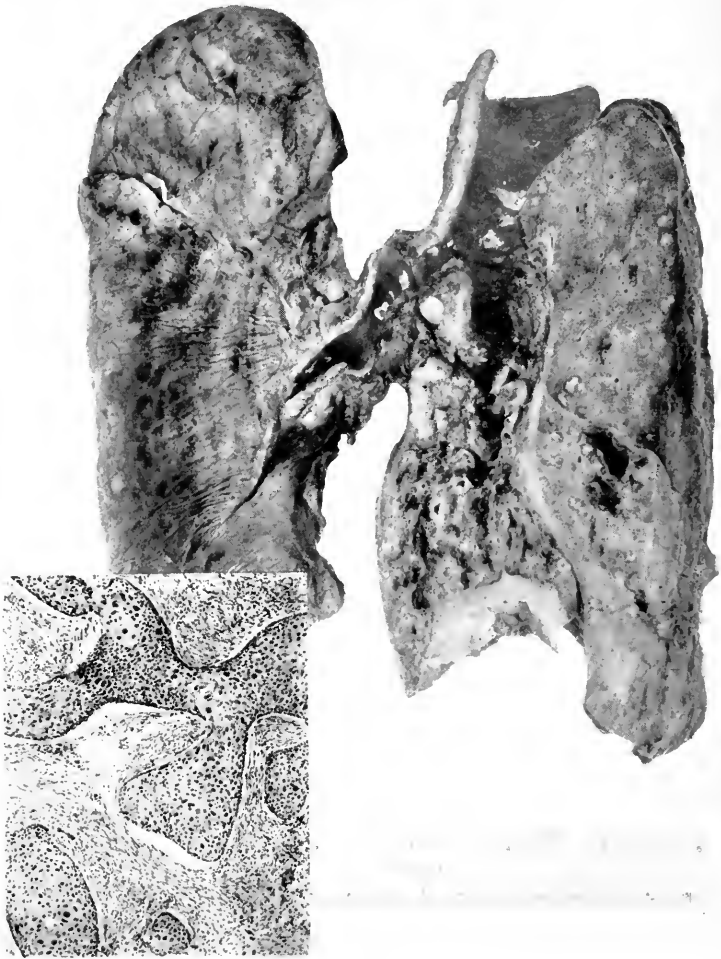


FIG. 1. GROSS AND MICROSCOPIC APPEARANCE OF THE SQUAMOUS CELL TYPE OF BRONCHOGENIC CARCINOMA

Photomicrograph $\times 70$

There is usually regional metastases to the lymph nodes at the hylus of the lung, and to the peribronchial and peritracheal nodes in the mediastinum. Implants in the parenchymal substance of the lung

are observed which may represent disconnected cancer fragments that have been aspirated deep into the lung. These cases usually succumb from infection rather than from carcinomatosis.



FIG. II. GROSS AND MICROSCOPIC APPEARANCE OF SMALL CELL TYPE OF BRONCHOGENIC CARCINOMA
Photomicrograph $\times 70$

The remainder of this series has been represented by a small cell or oat cell carcinoma. This growth also usually arises in the wall of the large bronchi near the hilus of the lung and consists of a solid,

dense infiltrating mass. There is less tendency to ulcerate and more tendency to infiltrate than in the squamous cell type. There is a marked tendency toward bronchial occlusion, and many of the clinical symptoms and pathological results are dependent on this physical factor. The growth occasionally extends to and involves the pleura but it more commonly remains localized in one lobe near the central portion of the lung. Regional lymphatic metastases are constant and remote metastases are common to the lung itself, liver, and especially is there a predilection for bone. Several of the cases observed here have had extremely widespread dissemination of the malignancy. The secondary manifestations in the lung as a result of the growth in the bronchus may be collapse or atelectasis, as the result of complete obstruction, or bronchiectatic dilatation and abscess formation resulting from stenosis, ulceration and incomplete obstruction.

In this short series we have not observed an adenocarcinoma primarily arising in the bronchial wall but when present its gross characteristics do not differ materially from the small cell type.

HISTOLOGICAL STRUCTURE

Squamous cell carcinoma: This type is usually represented by a fairly well differentiated tumor composed of masses and strands of squamous epithelium with abundant stroma. There is almost constantly inflammatory infiltration in the intercellular tissue because of the early tendency to ulcerate. Keratinization and pearl formation is not the rule, and in fact is seldom seen. It was prominent in one of the cases in this series in which the growth apparently originated in the wall of an abscess cavity.

Small or oat cell type: Histologically the cellular components of this tumor are, as the name implies, small oval or oat shaped epithelial cells that are closely packed and hyperchromatic. The stroma is scant and there is some tendency toward alveolation. Endothelial lined lymph spaces are fairly prominent with some tendency toward rosette formation around these lymph channels. Blood vessels are not prominent and possibly for this reason necrosis and degeneration are often rather extensive.

A less common histological type that was not encountered in this short series is an adenocarcinoma. This tumor has a fairly well differentiated glandular structure, being composed of moderate sized glands lined by rather tall columnar epithelium. Although these glands functionally secrete mucus, mucinous or colloid carcinoma in this position is rarely seen. The stroma is usually scant and loosely arranged.

TABLE I

AUTOPSY											
	1. A-997	2. A-1577	3. A-1895	4. A-1900	5. A-1909	6. A-1914	7. A-1941	8. A-1953	9. X-461	10. X-462	11. A-2059
Color, sex and age	White male, 40	White male, 54	White male, 47	White male, 41	White male, 52	White male, 52	White male, 46	White male, 58	White male, 66	White male, 50	White male, 40
Primary seat	Right bronchus	Right bronchus	Right bronchus	Right bronchus	Right bronchus	Right bronchus	Right bronchus	Left bronchus	Right bronchus	Right bronchus	Right bronchus
Result on bronchus	Ulceration	Stenosis and obstruction	None	Partial obstruction	Ulceration, stenosis	Complete obstruction	Obstruction right lower	Obstruction left upper	Obstruction right upper	Ulceration and stenosis	None
Secondary changes in lungs	Cavitation and abscess right lower	Atelectasis, bronchiectasis, abscesses	None	Necrosis and abscess right upper	Bronchiectasis, abscesses, pneumonia	Atelectasis	Atelectasis, bronchiectasis, abscesses	Broncho-pulmonary fistula, pyothorax	Abscesses, atelectasis right upper	Bronchiectasis, abscess, empyema	None
Regional metastases	Right hylic, mediastinal	Cervical, hylic, mediastinal	Hylic, mediastinal	Hylic and mediastinal	Right hylic and mediastinal	Hylic and mediastinal	Hylic and mediastinal	Hylic, mediastinal	Hylic and mediastinal	Hylic and mediastinal	Cervical, axillary, mediastinal
Pulmonary metastases	None	None	Right upper and middle	Bilateral	Right	Right	Bilateral	Right	Bilateral	Right only	Right only
Pleural invasion	Local right lower	Right upper local	None	Bilateral	Right	Right	None	None	Bilateral	Right only	None
Liver metastases	None	None	Multiple	Multiple	Multiple	None	Multiple	None		None	None
Spleen metastases	None	None	Multiple	None	None	None	Multiple	None		None	None
Pancreas metastases	None	None	Multiple	None	None	None	Multiple	None	Heart and lungs only	None	None
Adrenals metastases	None	None	Right only	None	None	Bilateral	Bilateral	None	organs observed	None	None
Kidneys metastases	None	None	Bilateral	Bilateral	None	None	Bilateral	None		None	None
Bone metastases	6, 7, 8, vert.; 6, 7, 8 ribs right	None	None	Pathological fracture left femur	None	Pathological fracture right femur, 8th rib	Right frontal	None		None	None
Brain metastases	Not removed	Not removed	Not removed	Not removed	Not removed	Not removed	Cerebellum	Not removed	Not removed	None	Not removed
Other sites of metastases	None	None	None	None	None	Sigmoid, left auricle	Dura, skin	None	Pericardium, heart	None	Skin
Other lesions	Subacute abscess lung, scarring mediastinal	Arteriosclerosis	Healed tuberculous calcified subpleural nodules	Generalized arteriosclerosis, pyelitis	Caseous tuberculous right lung, neurofibromata	None	Amyloidosis; spleen and kidneys	Coronary thrombosis	Coronary sclerosis	Purulent pericarditis	Ulceration, suppuration skin

SUMMARY OF PATHOLOGICAL FINDINGS IN 11 CASES

All eleven cases were white males. The youngest was 40 years, the oldest 66, with an average age of 50 years. The right bronchus was the primary seat of the tumor in 10 instances, the left once. The type

TABLE II
Summary of Pathological Findings in 11 Cases

Color and sex:		Pleural invasion— <i>Concluded</i> :	
All white males	11	Bilateral	2
Age:		Liver:	
Youngest	40 years	None	6
Oldest	66 years	Metastases	4
Average	50 years	Spleen:	
Primary seat:		None	8
Right bronchus	10	Metastases	2
Left bronchus	1	Pancreas:	
Results on bronchi:		None	8
None	2	Metastases	2
Partial obstruction	3	Adrenals:	
Ulceration	3	None	7
Complete obstruction	5	One only	1
Secondary changes in lungs:		Bilateral	2
Bronchiectasis	4	Kidneys:	
Abscesses	7	None	7
Atelectasis	5	One only	0
Pneumonia	1	Bilateral	3
Pyothorax	2	Bone:	
None	2	None	6
Regional metastases:		Femur	2
Hylic and mediastinal nodes	11	Ribs	2
Cervical	3	Skull	1
Axillary	1	Brain removed in only 2 cases:	
Pulmonary metastases:		No metastases	1
None	2	Cerebellum	1
Right only	6	Other sites of metastases:	
Bilateral	3	Skin	2
Pleural invasion:		Heart	2
None	4	Pericardium	1
Local over lesion	3	Dura	1
Right only	3	Sigmoid	1

of growth was a squamous cell carcinoma in 4 cases and a small or oat cell type in 7. The results on the bronchi varied from nothing to complete obstruction. There was no encroachment on the bronchus in two cases. It was partially obstructed 3 times. Ulceration was present in three instances. Complete bronchial obstruction was en-

countered 5 times. The secondary changes in the lungs were bronchiectasis in 4 cases, abscesses 7, atelectasis 5, pneumonia 1, pyothorax 2, and none in two cases. Regional metastases were constantly present in the hylic and mediastinal nodes in the 11 cases. The cervical glands were involved 3 times and the left axillary once. Pulmonary metastases were found in 9 of the 11 cases. They were unilateral on the right only in 6 instances. They were found in both lungs in 3 cases. Pleural invasion was observed in 7 cases. In 2 it was bilateral. Metastases were observed in the liver in 4 cases, in the spleen twice. Nodules were seen in the pancreas in 2 cases. The adrenals were bilaterally involved in 2 instances, in 1 case the lesion was unilateral. The kidneys contained metastases in 3 cases and in these there was bilateral involvement.

Metastases to bone were present in 5 cases. In two the femur was involved, in two the ribs, and in one instance the skull. Other sites of metastases included skin 2; heart 2; pericardium 1; dura 1; sigmoid 1. The brain was observed in only two cases, and in one of these a solitary nodule in the cerebellum was encountered.

The relative freedom from any but local metastases in the squamous cell type, as compared with the extensive dissemination of the malignancy in the small cell type, is one of the most prominent gross differential features in these cases.

I wish to express indebtedness to Dr. F. J. Geraghty for the use of case 9, and to Dr. C. C. Habliston for case 10.

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DIAGNOSIS IN PULMONARY TUBERCULOSIS¹

By FRED H. HEISE²

TRUDEAU, NEW YORK

Inasmuch as an individual who has been infected with tubercle bacilli reacts to a subsequent infection differently from one who has never before been infected, the diagnosis of pulmonary tuberculosis must in some measure be divided into two sections, namely the diagnosis of first infection and the diagnosis of subsequent infection. When tubercle bacilli are taken into the system by means of inhalation, which is the usual method of infection, it is now believed that lodgement is at first in the lungs. However, tubercle bacilli may undoubtedly be ingested by means of the digestive system with a primary lodgement within the lymph nodes of the mesentery. When the infection is by inhalation it is almost invariably brought about by bacilli of the human type whereas if the portal of entry of the infection is by means of the digestive system, either the human or bovine type of the bacillus may be the cause. Wherever bacilli first lodge one has a localized area of disease with consequent enlargement and injection of the lymphatic trunks leading to the nearest lymph nodes which always in turn become involved in the tuberculous process. This picture of a local focus with inflammation along the efferent lymphatics and enlargement and tuberculosis of the lymph node is spoken of as a primary complex and is the result of a primary infection. In the lung a primary complex can at times be readily visualized by means of properly taken x-ray films. Inasmuch as the first infection with the tubercle bacillus usually occurs when the individual is under the age of fifteen years, first infection is commonly spoken of as the childhood type of the disease although primary infection may take place at any age and the childhood type of disease would then be manifested. It is a characteristic of primary pulmonary infection that the original focus may be situated anywhere in the lung and that the tracheobronchial and bronchopulmonary lymph nodes are enlarged and caseous. The lesion within the lung may be very minute so as to escape detection during life by any known means, as may lesions in the lymph nodes at the root of the lung unless by considerable enlargement they encroach upon the lung fields or unless partial healing with calcification has taken place.

¹ Substance of an address delivered at the Annual Meeting of the Medical Alumni Association of the University of Maryland, May 31, 1934.

² Medical Director, Trudeau Sanatorium.

Shortly after first infection with the tubercle bacillus the body develops hypersensitiveness to the tubercle bacillus protein. Therefore when the various tuberculins or tuberculo-protein is subsequently administered in any tissue of the body there is an acute inflammatory reaction which develops usually within 24 or 48 hours and persists for days or weeks and, when given in the skin, leaves a discoloration which may persist for months. This hypersensitiveness remains for a long period of time if not throughout life, and it is not lost except during periods of other acute illnesses such as scarlet fever, measles, whooping cough, etc., and it is frequently very much depressed shortly before death from pulmonary tuberculosis. It is also possible that the tuberculin hypersensitiveness is lost as the infection is entirely overcome. Such experiences have occasionally been reported. The development of this hypersensitiveness is made use of in epidemiological studies to pick out those who have been infected with tubercle bacilli and it has also been of use in clearing up doubtful diagnoses of pulmonary tuberculosis at all ages.

Except in the first two or three years of life the reaction to the tuberculin test means nothing more than that the patient has harbored tubercle bacilli in his body at some time and apparently has no relation to the extent or character of his disease. When the child two years of age or under reacts to the tuberculin test it is logically concluded that the child still has active infection or disease of a primary infection type since the infection must have occurred within the period of the child's life. But the principle value of the tuberculin reaction in childhood is that it leads us to examine other members of the household for pulmonary tuberculosis as the source of infection of the child. So that the tuberculin skin test in childhood has both a direct and an indirect diagnostic value.

Unless the patient is extremely ill a diagnosis of tuberculosis should not be made unless he reacts to tuberculin or unless tubercle bacilli have been found on several occasions. The diagnosis of tuberculosis of first infection or the childhood type depends of course upon history, symptoms, physical signs, tuberculin test, x-ray examination and laboratory tests. From the history one might obtain information of association or contact of an intimate nature with someone who has pulmonary tuberculosis. And this is of importance in that we know from statistical studies that infection and disease in a child is more likely to take place the more intimate and prolonged the exposure. There are no symptoms which are indicative of the childhood type of tuberculosis. One may find the disease in those who are underweight, of normal weight or overweight and likewise the disease may be pres-

ent when the general condition seems excellent. However, there is usually a tendency to tire easily in the presence of recently active disease. In the early and less severe degrees of infection and of the disease, there is no tendency to cough but of course cough may be present during the stage of parenchymal infiltration and at times also when the brunt of the disease is in the lymph nodes at the root of the lung. Usually the young child does not expectorate. The temperature may be elevated but one must bear in mind that a child's temperature is rather variable. However, by and large, those with the childhood type of disease do not have abnormal elevations of temperature. Pleurisy with effusion occurs fairly frequently in children and if no other cause can be determined, then one must think of pulmonary tuberculosis. Physical signs in the childhood type of disease are absent in most instances. However, when the infiltration is diffuse or consolidation has occurred in the parenchyma, physical signs are found. It must be remembered however that the childhood type of tuberculosis may exist without any marked symptoms and in the absence of physical signs. The only safe method of diagnosis is by means of the x-ray and this might be said of all forms of pulmonary tuberculosis. The use of the x-ray is indispensable for a conclusive diagnosis. The nature of the lesions as seen in the x-ray film may be three-fold: one in which the brunt of the disease apparently lies within the parenchyma of the lung, another in which the major portion of the disease seems to be in the lymph nodes at the root, and the third, a combination of the first two.

LABORATORY FINDINGS

While the child coughs up no sputum as a rule, tubercle bacilli may be found in the feces or in the stomach washings and they should always be looked for.

Not all children reacting to the tuberculin test show evidence of their tuberculous infection by means of their x-ray films. Sometimes evidence of infection or disease is found in as low a fraction as one-tenth of the positive tuberculin reactors. This may be due to several factors. First, that the original infection is situated elsewhere than in the lung; second, that the focus may be so minute as to escape detection and third, that caseous lymph nodes at the root of the lung cannot be visualized. That this last occurs has been demonstrated by McPhe-dran and by Miller of Philadelphia. At autopsy they have found somewhat enlarged and caseous lymph nodes which could not be visualized on the x-ray films taken shortly before death. So that it may be unsafe to say that a child who reacts to tuberculin and in

whom one cannot see any definite pathological changes is free of tuberculosis. Such a child is termed a tuberculin reactor and unless obviously ill is not placed under treatment but should be removed from the source of infection and placed under observation for a variable period of time. While it is true that pathologically such a child has a focus of infection or, to be more exact, anatomically a focus of disease, nevertheless he is not spoken of as having the disease unless one wishes to prefix the word "anatomical," but he is more commonly spoken of as a tuberculin reactor or one with tuberculous infection.

ADULT TYPE

Our knowledge as regards the interval which takes place between the time of first infection and the development of the characteristically adult type of pulmonary tuberculosis is at this modern date somewhat hazy. It is not definitely known whether the adult type of tuberculosis originates from the offspring of bacilli of the first infection or from bacilli which have been introduced from without while the child or the young adult is still hypersensitive to tuberculo-protein, or from a combination of both. However, we do know that primary infection is as a rule a comparatively benign disease after the second or third year of life and also we know that the adult type of tuberculosis does not appear with any frequency until at or about the time of puberty and that between these two ages there is comparatively little fatal pulmonary tuberculosis. We know that the number of tuberculin reactors gradually increases from the time of birth until the adult age of 21 years. We also know from the observations of Heimbeck and others that those young adults who react to the tuberculin test are less likely to develop tuberculosis than those who do not react to the tuberculin test. But whatever happens the type of tuberculosis which becomes prevalent at the time of puberty, the adult type, differs in some respects from the childhood or first infection type. We know that it does not develop except upon hypersensitive soil. We know that it is most frequently localized in the upper half of one or both lungs, that it is essentially a chronic type of disease and has a tendency toward cavity formation and fibrosis and that it is by no means as benign as the childhood type. Nor are the bronchopulmonary or tracheobronchial lymph nodes involved to any degree. The diagnosis of this adult type of tuberculosis is made by means of history, symptoms, physical signs and x-ray and laboratory findings. Again a history of contact prolonged and intimate and especially with an ambulatory case whose sputum contains tubercle bacilli, is extremely suggestive.

There are no symptoms pathognomonic of the disease. Whatever symptoms are present are usually referable to the thorax and to a general disturbance of the body. Cough and expectoration may occur; likewise pain in the chest, shortness of breath, hemoptysis and the development of pleuritic effusion. There is nothing significant as regards cough and expectoration nor the dyspnea nor the pain in the chest. However, coughing up of blood of a teaspoonful or more is very suggestive as is also the occurrence of a pleuritic effusion not directly traceable to some other cause such as an epidemic streptococcic, pneumococcic, etc., infection. Tuberculosis may exist without any one or without all of these localizing symptoms. Indeed, the disease may even be getting worse or progressing without them.

Among the constitutional symptoms may be mentioned an elevation of temperature, fatigue, loss of appetite and strength, nightsweats, etc., but these are not pathognomonic of tuberculosis but are simply those of some form of general intoxication such as might arise from any focal infection. Again, tuberculosis may exist without any or all of these symptoms and may even be progressing in spite of their absence.

Physical signs may or may not be present. In the early stages of the disease they are for the most part entirely absent and even cavitation may exist and cavitation of some size, 5 or 6 cm., without any evidence of abnormal physical signs. However, when the disease has advanced beyond the minimal into the moderately advanced and far advanced stages, physical signs are usually present and of course vary according to the condition present in the lung. The most valuable sign in the diagnosis of pulmonary tuberculosis in the early and less extensive forms of the disease is the occurrence of moderately coarse râles elicited by having the patient breathe out, give a cough and breathe in while one is listening with a stethoscope. Inasmuch as even today pulmonary tuberculosis is the most frequent chronic lung disease of adult life and inasmuch as the disease is usually confined in the upper half or third of the lungs, the finding of moderately coarse râles in the upper half or third of one lung or both lungs in an adult would naturally make one feel that tuberculosis was present until it had been ruled out by other methods. This, I think, is a safe procedure but of course it has its exceptions.

As with childhood disease, the x-ray gives us a great deal more definite idea as to the presence, the extent and character of the disease than can be elicited from physical signs. The diagnosis of tuberculosis in the absence of tubercle bacilli from the sputum ought really not be made unless one has definite information obtained by means of x-ray examination. Here again one finds the lesion usually in the

upper half of the lung on one or both sides. Its manifestations may vary from a small degree of mottling to intense consolidation with or without cavity formation.

LABORATORY FINDINGS

One of the most frequent errors in the diagnosis of tuberculosis lies in failure to properly examine the sputum for tubercle bacilli. However in the earlier stages of the disease and in the lighter infiltrative forms, tubercle bacilli are frequently not found in the sputum even upon guinea pig inoculation and concentration methods. It is unsafe to wait until tubercle bacilli can be found. But when found on several occasions, it is usually a pathognomonic sign of tuberculosis although other acid fast organisms which stain like tubercle bacilli and look like them may occasionally occur in the absence of tuberculosis.

CONCLUSIONS

The diagnosis of tuberculosis of the adult type, then, may be said to rest primarily upon a history of hemoptysis or pleurisy with effusion; the occurrence of moderately coarse râles in the upper half of the lung; the finding of definite parenchymal changes in the upper half of the lung by means of x-ray examination and the finding of tubercle bacilli in the sputum. One usually does not go far wrong if he relies upon these four principles of diagnosis. However, mistakes are made at all times. Thus, hemoptysis is not always caused by pulmonary tuberculosis. It is perhaps more frequently found in bronchiectasis than in pulmonary tuberculosis but inasmuch as there are probably more patients with pulmonary tuberculosis than with bronchiectasis it is safer to say that hemoptysis is caused by tuberculosis until proved otherwise. This may also be said of finding acid fast bacilli in the sputum so that at times the only safe method of proving tuberculosis is by means of inoculation of concentrated sputum into guinea pigs and the subsequent production of tuberculosis in them. Conditions sometimes mistaken for pulmonary tuberculosis on account of the occurrence of hemoptysis are bronchiectasis, heart lesions and malignant growths of the bronchi, lungs and pleura. Each of these may be accompanied by the symptoms commonly ascribed to tuberculosis. Again it must be remembered that pulmonary tuberculosis may exist in a quiescent or arrested state and the patient's symptoms be due to some other condition.

(Slides showing the types of pulmonary tuberculosis, statistics relating to tuberculin reactors and types of disease, the value of stethoscopic and sputum examinations and of conditions mistaken for pulmonary tuberculosis, were shown.)

OUR DUTY AND RESPONSIBILITY¹

By G. O. SHARRETT, M.D., F.A.C.S.

CUMBERLAND, MD.

It is fitting that I begin this address by an expression of great appreciation for the honor conferred upon me. To follow the Presidents of this Society, whose ability is so well known, evokes a sense of humility commensurate with the greatness of the honor bestowed.

My acceptance is rendered somewhat easier because I feel it is a tribute to the Physicians and Surgeons of Western Maryland rather than to me personally; a tribute that will stimulate all of us in Western Maryland to greater effort.

To the officers of the Society and the Council, I should not fail to express my thanks. Upon their unremitting labor, year in and year out, our success really depends, no matter who may be honored with the presidency.

Our great respect for the accomplishments of our leaders in the past must not blind our eyes to our own immediate duties. However depreciatingly we may look upon ourselves, we should not fail to realize that the men whose past labors have made the Society great, look to us to make it still greater. Therein, is a call to duty to each of us to do our best. A half-hearted interest is not enough.

A physician has a great responsibility upon his shoulders. Health, happiness and life itself depend upon our ability to diagnose a condition; to apply the specific remedy and this must be done with our nerves steady and our minds clear. To us has been entrusted the almost divine art of ushering into the world a new life, of healing the sick and of giving peace to an earth-tired spirit. And, because of this sacred trust, it is our duty, not only to fit ourselves for the work, but *to do all in our power to advance the science of medicine*. We should encourage, advise and assist those who are fitted for its practice; and forever drive from the fields of medicine and surgery those who are a menace to life and health and an insult to our noble calling.

In ancient times, and in all countries, the profession of physician was annexed to the priesthood. Men imagined that all their diseases were inflicted because of the immediate displeasure of the Deity; and, therefore, concluded that the remedy would most probably proceed

¹ Presidential Address at the One Hundred and Thirty-Sixth Annual Meeting of the Medical and Chirurgical Faculty of the State of Maryland, Baltimore, April 24-25, 1934.

from those who were particularly employed in His service. Whatever, for the same reason, was found of efficacy to avert or cure distempers was considered as partaking somewhat of the Divinity. Medicine was always joined with magic; no remedy was administered without mysterious ceremony and incantation. The use of plants and herbs, both in medicinal and magical practice, was early and general.

The Chinese, who aspire to be thought an enlightened nation, to this day are ignorant of the circulation of the blood; and even in England, the man who made that noble discovery lost all his practice in consequence of his genius. Hume informs us that no physician in the United Kingdom who had attained the age of forty ever submitted to become a convert to Harvey's theory.

Once upon a time, says Herodotus, in the land of the wise there were no doctors. In Egypt and Babylon, the diseased were exposed in the most public streets, and passers-by were invited to look at them, in order that they who had suffered under similar complaints and had recovered might tell what it was that cured them. Nobody, says Strabo, was allowed to go by without offering his gratuitous opinion and advice. Then, since it was found that this practical idea did not work to perfection, the Egyptian priests made themselves students of medicine, each man binding himself to the study of a sole disease.

"It is hardly an exaggeration to summarize the history of four hundred years," says President A. Lawrence Lowell of Harvard University, "by saying that the leading idea of a conquering nation in relation to the conquered was in 1600 to change their religion; in 1700 to change their laws; in 1800 to change their trade; in 1900 to change their drainage. May we not say that on the prow of the conquering ship in these four hundred years, first stood the priest, then the lawyer, then the merchant and finally the physician.

In little more than a century, the medical profession has done more for the race than has ever before been accomplished by any other body of men. These gifts to the people have come in the form of vaccination, sanitation, anesthesia, antiseptic surgery, the new science of bacteriology and the new art in therapeutics which has affected a revolution on our civilization.

Medicine is the most difficult of science and the most laborious of arts; it taxes the powers of body and mind. A doctor who is true to the ideals of his profession will not place a monetary value as his first consideration on his services, but the welfare of the patient and the restoring of his health will be the first and paramount consideration in his mind.

Medical service costs more now than it did in the "good old days."

Compared with what it was, say, in the "gay nineties," a doctor's bill is so much larger today that many people are seriously concerned about it as a public question. In every way, it costs more to be sick.

The kindly old doctor of a generation ago, with all his lovable human traits, probably was the indirect cause of a rather disturbing situation which exists in the medical field today.

The practitioner of other years usually was a haphazard sort of a business man. He was generous to a fault; and his patients, being human, imposed upon him. Folks got into the habit of putting their doctor's bill last on the list; and, if there was not quite enough money to go around, well, good old Doc wouldn't be too mean about it. Fees collected often were only a fraction of the fees earned.

This subject of cost is one of the greatest outstanding problems before the medical profession today, as well as one of the much talked about subjects by civic organizations and the public.

There seems to be a growing unrest in the medical profession owing to inadequate compensation; and, among patients, there is a widespread complaint because of the inadequacy and high cost of services, which they really do not understand. Dozens of magazine articles and a number of newspaper items published in recent months have emphasized the extent and keenness of popular interest in the problem. These discussions have brought forth varieties of opinions.

People are reaching out for a solution of the economic problems which have arisen from the scientific revolution in medicine. Many of the articles that have been written on this subject have been by laymen.

The largest measure of the doctor's reward lies in the knowledge that he is serving humanity for a vital purpose. It must be recognized, however, that the doctor is subject to the same economic forces that weigh upon the rest of society; has the same needs, desires and ambitions; and cannot be expected, if he is to continue to live and render this service, to find his sole reward in the satisfaction of conscience. In most of these articles, an analysis of the various factors that enter into the cost of medical care is seldom made. A satisfactory solution of this weighty problem will be reached only when the study is extended so as to include all other economics of the present-day activities of the people.

One of the first things that enters into the expense of medical care is the cost and expense of medical training and education. Statutory requirements in all States now provide that to practice medicine in any State a doctor must be a graduate of a reputable medical school, pass a licensing examination before a state or national board; and

register annually with some officer in the county of practice. In addition, a hospital interne year is required in fourteen States. The minimum requirements for admission to acceptable medical schools, in addition to the high school work, are sixty semester hours of collegiate work exclusive of military and physical education, extending through two years of thirty-two weeks each, exclusive of holidays, in a college approved by the Council on Medical Education and Hospitals. This cannot be accomplished without an outlay of expenditure of very much less than fifteen thousand dollars to the student. After this, in order for one to keep abreast with the medical profession, it is necessary for him to be taking post-graduate work most every year—which is very expensive. This is necessary if a doctor is to keep up with the latest methods and the advancement made in the medical world. The people are demanding, and they have a right to, the very best medical talent that can be had. Money value should not have any consideration when you are dealing with human life.

The equipment and furnishings have become more elaborate and more complicated and therefore more costly. The diagnostic appliances, laboratories, x-ray outfits are all essential now in rendering proper service to the patient.

The principal thing that has driven medical fees to their present height is the cost of delivering medical services. A doctor who keeps up to date in professional knowledge and equipment is compelled to spend from forty to sixty cents of every dollar that he receives to defray the actual expense of delivering competent service to his patients. This heavy overhead expense is something that did not exist in the nineties.

A progressive doctor spends considerably more than a hundred dollars a year for books and journals alone, and a good many more dollars a year attending professional meetings and post-graduate courses, so that he may keep up his standard of ability.

Taken all together, the overhead expense that goes into the service that a patient gets, even though it is merely a fifteen minute consultation at the office, is astonishing. A patient may spend ten minutes in the office and yet the service rendered may involve enough overhead to call for a fee of ten or twenty-five dollars.

No physician can ever be said to have finally mastered his profession. There is always something new to learn. He must keep constantly studying if he is to keep abreast of developments. There is probably no other profession in which so much work of this sort is required of the conscientious practitioner. His education is never completed.

The hours that a physician spends with his patients consume only

a part of the time required by his job. He may give the needed service in a "jiffy," but it has taken years of study and observation to accumulate the information and skill that enables him to render it—a point that is often overlooked in passing judgment on the fairness of the doctor's bill.

Another reason for the higher cost of modern medical service is that today the medical profession has more to give to the public, and this greater value received must be paid for. As the great mass of doctors are not financially endowed and are not possessed of independent incomes, they are compelled to make their practice pay expenses. Under our present social organization, there is no way of getting to the patient the benefit of modern medical science except to require the patient to pay the costs.

It would not be possible within the confines of a short speech to enumerate and extol the feats of modern medical science. No one needs more than the merest reminder in order to realize and appreciate that the accomplishments of modern medical science are little short of miracles in the relief of suffering, the salvage of human efficiency and the prolongation of the years of living. What I do wish to bring out is the fact that all these advances have to be paid for—just as our sky-scrapers and good roads, our automobiles and parks; our good clothes and vacation trips have to be paid for. The money for them does not remain in the doctor's pocket. The doctor is merely a sort of retailer of these benefits; the dollar that he gets must be distributed among a great many agencies that are carrying forward the front line of medical progress to save life and relieve pain—among educators, research workers, manufacturers, distributors and all the complex social fabric that makes it possible for all these people to work together.

If there is any one who is sincere in his complaint about the exorbitance of medical expenses, let him imagine for a moment how it would be if all modern medical service were suddenly wiped out.

Is any price at all too high to pay for the clean, strong, healthy bodies that we are seeing about us today, and for the clear headed persons who look cheerfully forward to tasks ten years ahead in all reasonable confidence that they will still be alive and well able to perform them?

These benefits are being delivered to the public by the medical profession. Their cost is high. But it is a cost that is reaching the consumer on a competitive basis. The law of supply and demand is making it the lowest possible price at which these benefits may be produced under our present state of social organization.

People are working fewer hours today and earning more than ever

before and when an unexpected condition arises, it is claimed they are unable to meet the expenses; therefore, we seem to have lost the desire of saving for a rainy day and feel that we must not only have the necessities but the luxuries regardless of our incomes. As a result, we are almost constantly in debt and one thing that has contributed to this more than anything else is the present-day installment plan of paying for things and the high-pressure salesmanship.

The business and financial world look upon the installment plan as a great success and from their viewpoint, it is. It is not my purpose to condemn entirely the installment plan, but simply to emphasize the fact that when one indulges too much in installment buying of luxuries to the extent of neglecting every reasonable effort to provide for the ordinary obligations of life, he has little right to claim charity of the profession, for when the income above the bare necessities of life is pledged for the purpose of making installment payments; and the unexpected (which should always be expected, since it always happens) comes and the individual is unable to meet the expense necessarily connected therewith—he either defaults on his medical bill or on his installments.

If the writers who are so little informed on the expense of medical care and are so interested in trying to assist the people in economic affairs, would give their time and space in trying to educate the people to leave off these non-essentials and be prepared for emergencies which come to all of us, they would be rendering the public a greater service than trying to discount the doctor by prejudicing the public against charges of the medical profession which is trying, and spares neither time nor money, to prolong life and improve the health of the country—generally.

Most of the articles that are written and the discussion of medical care seem to be hitting mainly at the doctor's fees; which, in reality, has not advanced in comparison with services in other lines.

According to the report of the Committee on "The Cost of Medical Care" it cost \$1,090,000,000 to pay 142,000 doctors' fees; or an average of seven thousand six hundred and seventy-six dollars per doctor. For overhead, take forty to sixty cents out of every dollar and there remains an average income of three thousand to four thousand five hundred dollars a year; out of which the physician must live, buy clothes, support and educate his family. While \$485,000,000 which is one-third of doctors' fees, are spent for patent medicines, osteopaths, chiropractics, naturopaths and allied group and faith healers. Most of which is practically wasted.

This calculation was made at the peak in the year 1929. Figure

what the average income will be in 1933. You will find that the average doctor will have from one thousand to two thousand two hundred and fifty dollars to take care of and educate his family. With what result—he cannot meet his obligations.

Compare the class of men who study medicine, their years of preparation, their intelligence, their self-sacrifice and the cost physically and financially, with the class of men, with but few exceptions, who enter politics. Then remember that the medical profession permits itself to attempt to practice under laws and regulations, most of which are suggested by members of the average *state legislature and city councils*.

The legal profession should be taken as an example for the medical profession. It has an active body known as the bar association; and through this association, laws are suggested and formulated, and are rarely passed if they have any direct bearing on their profession without sanction of this association.

In no other profession or business are there so many channels being used to divert from the proper source their rights, legitimate business and income, as we find directed against the members of the medical profession.

Physicians should take more interest in their various societies—starting with their local society, their county medical societies and their State and National societies. They should insist that each one of these societies take an active part in the making of laws which vitally concern and interest the physician.

The law-making and law-suggesting should be taken absolutely from the laity, politicians and special interests; and, by force of numbers, backed by sincerity of purpose and absolute unity and public opinion. The profession should compel laws to be passed relegating abuses and permitting only such laws as will be healthy for the physicians and public alike—to be written into the statutes.

The proper function of a medical society should be to interest itself in any problem concerning the physicians within its jurisdiction, as well as to have scientific programs which concern only the patient.

The State body should be alive to the interest of the physicians in the State, and should insist upon real legislation for the protection of its members and their interests—rather than a series of bureaus where only medical or surgical subjects are listened to and discussed once a year, topped off with a series of pink teas, dinner and golf.

So should national societies be active in preserving the men who are the backbone of the Nation rather than devoting their entire time to working out forms of standardization and the exploitation of theory. If we do not provide nourishment for the roots of a tree, spraying the fruit will be of little value.

Every honest physician, and I believe the majority of them are perfectly honest, wants to see the diseases which cause terrible suffering and are dangerous to life, stamped out—wherever possible or properly controlled if it is not possible to entirely eradicate them. But the physicians should have their opportunity to be the guiding factor of the cases where the public are able to pay for such service.

It is as much the duty of every physician and his family to become a factor for his own protection as it is the duty of every citizen to regularly vote to choose the proper representatives in all branches of government.

Where is the physician who would not inscribe his name in flowing John Hancock script to the proposition of free medical service to the poverty-stricken and ailing; but when free clinical service is administered to those quite able to pay, while bureaucratic boards of health officials in different sections of these United States advertise their superior therapeutic facilities and give medical attention and preventive medical measures and immunization with the taxpayer's money to a throng of seekers who flock like flies around sugar, and take from the physician a legitimate source of income, then the physician has a right to register one loud, long howl.

A certain elevation, a certain dignity, is necessary to the successful practice of our calling; but, when that aloofness sets us apart from human consideration as men, when we ourselves erect an invisible but unmistakable wall between us and the world, it is time to consider a change in attitude.

In France, there is a monument to Pasteur, and it has on it a brief inscription in French which has always seemed to me one of the most impressive and accurate inscriptions that I have ever heard quoted. It may be rendered freely in this way: "To cure sometimes; to relieve often; to comfort always." That is rather a fine summary of the opportunity of the physician armed with his wealth of experience and scientific knowledge.

We have, at least in medical teaching and training and in public health work, turned the emphasis from therapeutics to prevention; and that is going on more and more. If a thousand infants were permitted to become actively ill, the death rate would be very much greater than is the case when that illness is specifically prevented by controlling certain of its well known causes.

There is no substitute for health. There is nothing of any consequence that can be accomplished in this World, save by some extraordinary genius, except on the basis of health. A present day philosopher has said, "Health is an end in itself and a means to all other

ends." There is positively no use in trying to substitute scientific knowledge for health; interesting occupation for health; pecuniary gain for health. It is substituting dross for gold.

A physician is armed with tools, great powerful weapons. He is armed first and chiefest with the instinct of humanity, human feeling, service and sympathy. The physician, more than any man in a modern community, loses control of his own time. He may not agree with certainty to be anywhere at a given time, for his professional instinct forbids him to refuse a call to relieve suffering. I hope the time will never come, when the test tube and the microscope with all their immense value will be permitted to displace the fundamental humane and human instincts which make the great Physician.

In New York during the last five years, the diphtheria mortality rate was reduced seventy-five per cent over the previous five year period. The diphtheria death rate in New York State is approximately a little over two per one hundred thousand. A continuation of intensive educational campaign to have children immunized will eventuate in the utter disappearance of this disease.

What has been done in New York can be done everywhere. Diphtheria will follow the paths of cholera and yellow fever and other diseases of infectious origin which today are rapidly diminishing in volume. What is true of diphtheria may be true in the next few decades of measles, whooping cough and scarlet fever.

May we look forward in confidence to the realization that children may reach adolescence, not only free of these diseases; but, what is of equal importance, free of their damaging sequelae which frequently manifest themselves in adult life.

The picture, therefore, which we have today, is the prospect of the disappearance eventually of most if not all diseases of germ origin. Newer researches will give us additional information regarding certain diseases whose causes have not as yet been definitely ascertained. It is one of the ironies of the situation that we still know comparatively little about the most common disease. I refer to the common cold. Here, too, are indications, even more than indications, that we are on the verge of discovering its cause. When we shall have found it, we shall have made great progress and shall have relieved humanity of the most frequent cause of debilitating illness.

Encephalitis, poliomyelitis, meningitis and pneumonia are in the same category. As yet, research in these fields has not reached the point of completion so that we may know how to prevent them. But anyone who follows the research work now being done in many laboratories, cannot help but feel that in these fields as well, we shall soon know, not only how to cure, but how to prevent.

This is a fragment of the advances that have been made along preventive lines. It will take a library or two to fully cope with these gigantic strides leading to the complete emancipation of humanity from the ills that beset it.

In our Land of Freedom, the very nature of society requires that physicians shall have some general system of written ethics to define their duties; and, in cases of doubt, regulate their conduct toward each other and the public in their intercourse and competition. Every individual in the profession is, of course, supposed to be gentlemanly, actuated by a lofty professional spirit, striving to do right and to avoid wrong; and, even where there are no written rules at all, the vast majority would naturally conform to the rules of justice and honor, as far as they understood them.

The absence of rules for our government would leave us at liberty to frame our own codes, and no matter how equivocal our position, or how crooked or insincere our ways, no one would be in a position to prove that we acted from unworthy motives, and not from an error of judgment, even in the most flagrant violation of the cardinal, the glorious old-fashioned Golden Rule, the climax of all ethics, laid down by Confucius and repeated by the Nazarene Physician. Do unto another what ye would he should do unto you; and do not do unto another what you would not should be done unto you. Truly, a world of ethics in a nutshell—and an ocean of morals in a drop.

The non-existence of a code would also make it possible for one physician to pounce upon the patient of another doctor, like a wolf on sheep, and to carry on a regular system of infringements, self-advertising, certificate-giving and wrong-doing in general—regardless of their rights—and still claim to be as honorable as Socrates, while those aggrieved would have no visible standard of appeal by which the contrary could be proven.

In view of these and many other facts, it has been found necessary to have a code of written ethics for regulating the conduct of physicians toward each other and toward the public in general.

Doctor Thomas Percival, an English physician, published a small book in London in 1807, in which he proposed an admirable code of ethics which, excepting a few alterations made necessary by the lapse of time and the advance of medical science, is the identical code adopted by the American Medical Association in 1847; and, which from then until now, has governed nine-tenths of our profession throughout this broad land—protecting the good and restraining the bad, just as the Ten Commandments instruct and restrict mankind in general.

To this lofty code, in a great measure, is due the binding together and elevation far above ordinary avocations, of the medical profession of our land, and the esteem and honorable standing which it everywhere enjoys.

By its dignity and justness, it remains as fresh and useful today as when the profession adopted it; and, if we faithfully observe its canons, we can truthfully exclaim—"I feel within me a peace above all earthly dignities; a clear, quiet conscience."

In our land, the code is regarded as the balance wheel that regulates all professional conduct, and none can openly ignore it without overthrowing that which is vital to his standing among medical men.

As the President of the Medical and Chirurgical Faculty of the State of Maryland, I want to arouse each and every one of you to your own responsibility. I am making an earnest plea that each and every one of you appoint yourself a committee to see that every physician in the State of Maryland is a member of this organization. That you yourselves will pledge to carry out to the letter the rules and regulations concerning the ethics of our profession—regulating your conduct concerning your brother practitioner and the public.

In order to meet the present day economic problems, we must be united in purpose and be ready at all times to carry on to the honor of our profession.

We must set our own house in order. When we do, we are then ready to combat all criticism from any source and defend the high standards of our profession and stand before our critics proud and fearless.

In closing, may I ask you to think well of what I have attempted to bring to you; reject what is false; examine what is doubtful; remember what is true.

ANEURISM OF THE TEMPORAL ARTERY. II¹

BY NATHAN WINSLOW, M.D., AND MONTE EDWARDS, M.R.C.S. (Eng.)
BALTIMORE, MD.

In table 12 we have attempted to assemble in tabular form all of the examples of aneurism of the temporal artery that have been recorded in the literature. Therein one will find the chief episodes of each case. We realize, however, that some cases may have been overlooked. In an investigation of this character, covering as it does many languages, oversights are inevitable. The cases fall naturally into four groups: (1) Those of spontaneous origin; (2) Those of traumatic origin; (3) The unclassified, and (4) The arterio-venous fistulae. To conserve space the several groups have been placed in one table but each type has been well segregated.

¹ From the Surgical Department of the University of Maryland, School of Medicine.
For first instalment see BULLETIN OF THE SCHOOL OF MEDICINE, University of Maryland, 19: 57, 1934.

TABLE 12
Case Histories

NUM-BER	AUTHOR	AGE SEX SIDE	DURATION	OPERATION AND TREATMENT DATE	CURED	DIED	REMARKS
Operations for spontaneous aneurisms							
1	Fontagnères	28 F R	1½ years	Incision sac, circulation controlled by pressure above and below sac, insertion zinc paste; April 2, 1872, free secondary hemorrhage controlled by tampon impregnated with perchloride of iron March 19, 1872	Yes	.....	From February 26 to March 2, 1872, had applied mechanical compression off and on, without success; therefore, on March 5, he injected 6 drops of perchloride of iron into tumor but with indifferent results; tumor solidified slightly, and beat less energetically; March 11, compression repeated, without result; he, therefore, decided to try cauterization. Patient had not been much incommoded by beats; its growth alone influenced her to seek advice. Diagnosis: spontaneous aneurism of temporal artery.
2	Cheever, D. W.	36 M L	3 years	1. Ligation temporal by Crosby 1877 2. Ligation external carotid March 25, 1879 3. Incision sac; wound packed April 7, 1879	Yes	.....	Lesion followed throwing heavy trunk on to top of a coach. First operation did not fully stop pulsation in swelling, but mass decreased considerably in size. A year ago, it began to grow again and filled temporal fossa. After second operation, pulsation ceased to reappear again by April 6, but mass had shrunk to one-half its former size. Six days after last operation, no pulsation could be detected. Cheever remarked: it seemed probable that this aneurism was of variety called circoid, although it had an aneurismal bruit like a single sac, yet its margin was encircled by numerous enlarged arteries.
3	Calvert, J. T.	22 M L	2 months	Excision August 21, 1891	Yes	.....	Had 2 small tumors on temporal near eye. Patient gave no history of trauma nor of syphilis.

4	Bloodgood, J. C., in Reid, M. R.	57 M R	5 years	Ligation common carotid artery	Im- proved	.....	Lesion size of orange. Had lues 12 years before; right hemiplegia 2 years ago. Immediately after operation no pulsation and sac much smaller, but, by April 3, 1896, sac had refilled and on discharge was as large as ever but not pulsating. No history of injury in account as reproduced by Reid.
5	Pupovac, D.	78 F R	3 years	Excision after ligation of artery above and below sac May 11, 1907	Yes	.....	No history of injury. Hazelnut-sized tumor. Caused no annoyance. Pupovac remembered a museum specimen of a traumatic temporal aneurism which Billroth had removed. (The authors could find no other mention of this case.)
Spontaneous aneurisms treated conservatively							
6	Stone, E.	F	Some time	Compression caused so great distress that operation had been accepted but pneumonia developed in the course of which inflammation attacked that side of head. On its subsidence the tumor had shrunken one-half in size and had become quite firm 1828	Yes	.....	Size of walnut. It had remained stationary until 1828, when it enlarged and became troublesome and interrupted sleep by its throbbing pain.
7	Lowe	25 M	Few days	Compression self-administered upon artery in temple for a couple of hours at a time but had to desist on account of pain; December 3, cork compress placed upon tumor 1863	Yes	.....	Frontal region. Size of sparrow's egg. Painful. Patient was in bad health having suffered from jungle fever.
8	Santi, L. de	Man M R	2 or 3 years	Compression (digital) to artery below tumor started November 13, 1878, and applied at intervals for 182 hours. Direct compression had failed 1878	Yes	.....	Painless. Size of small nut. Had never had an accident, was not a syphilitic nor an alcoholic. Vessels not atheromatous. July, 1880, cure reported as complete.
9	Cooper, A.	Woman F	.....	.....	.....	.....	Young lady, seen in consultation with Cline for large tumor in forehead, cause unknown. He proposed to make a circular incision around sac to bone, to divide all vessels which fed it and to make use of pressure upon it.

TABLE 12—Continued

NUM- BER	AUTHOR	AGE SEX SIDE	DURATION	OPERATION AND TREATMENT DATE	CURED	DIED	REMARKS
Operations for traumatic aneurisms, consecutive to wounds							
10	Burns, In Burns, A.	Man M	2 weeks	Excision, wound packed 1809	Yes	.....	Arteriotomy 14 days before for an apoplectic affection. The Burns were called in because the man had lost much blood. Compression had been tried to control the hemorrhage and a practitioner had attempted to tie the trunk of the injured artery. Hazelnut-sized tumor filling wound and from a small orifice in it was projecting with great impetus a stream of arterial blood. Diagnosis: anastomosing aneurism.
11	Schreger	20 M R	6 weeks	Ligation artery below swelling; compression tried first, but discontinued on account of pain 1810	Yes	.....	Consecutive to stab wound; $\frac{1}{4}$ inch in circumference.
12	Desruelles, H. M. J.	25 F	1 month	Ligation cardiac side of vessel; compression had failed April 5, 1824	Yes	.....	Consecutive to arteriotomy. Size of nut.
13	Bushe, G.	Man M	6 weeks	1. Incision sac and wound plugged May 22, 1826 2. Ligation trunk of vessel near ear May 26, 1826 3. Excision sac June 15, 1826	Yes	.....	Arteriotomy. Wound did not unite and tumor formed which bled profusely from May 18 to 22. Both first and second operation failed to arrest progress of disease. June 15, mass was size of hen's egg. Bushe said he had seen many aneurisms arising from arteriotomy. At one time he was in habit of securing trunk of vessel, but more lately he had been uniformly successful by making firm pressure with a wrapped coin secured by a firm roller.
14	Bushe, G.	Man M L	14 days	Excision sac, 2 ligatures applied and cavity packed; pressure had been applied but unsuccessfully 1826	Yes	.....	Arteriotomy for epileptic fit. Bled freely and repeatedly from wound. Tumor size of filbert.

15	Bushe, G.	Man M R	2 weeks	1. Ligation 3 vascular trunks 1827 2. Excision sac 1827	Yes	.....	Arteriotomy for iritis. Tumor size of walnut. Repeated attacks of bleeding. First operation did not answer, for on 18th day tumor had grown to more than size of hen's egg. Bushe called these 3 cases anastomosing aneurisms but it seems to us that the term has been rather loosely applied, or that Bushe has misinterpreted the nature of the condition with which he was dealing. Many of the earlier writers have fallen into the same error which has made sorting of true aneurisms from those by anastomosis a very difficult task.
16	Ballingall	28 M	3 weeks	Excision sac, ligation of artery at its inferior end; instrumental compression had failed December, 1828	Yes	.....	Size of nut on anterior branch consecutive to arteriotomy. Ballingall remarks: Small aneurismal tumors of the temporal artery are by no means infrequent after arteriotomy, but if treated in an early stage, they are almost always cured by pressure.
17	Cooper, A.	Man M	.....	Incision sac, ligation temporal artery at its lower part as well as many feeders to the sac	.....	.....	Says he has seen several cases of temporal aneurism from arteriotomy.
18	Carswell	38 F L	4 weeks	Ligation of vessel August 11, 1836	Yes	.....	Arteriotomy. Caused no pain. Grew rapidly. Cooper saw patient at request of Carswell. Though article does not say so, Cooper apparently was the operator.
19	Metz	Man M L	.....	Ligation temporal artery 1839	Yes	.....	Cut head against stone. Wound bled from time to time. Hazelnut-sized tumor over eye.
20	Törnroth, L. H.	R	.....	Ligation common carotid artery; ligation temporal attempted but he desisted for fear of rupturing sac 1845	Yes	.....	Arteriotomy. Tumor in front of and above ear.
21	Hall, T. W.	Boy M R	Some months	Incision sac, only one end of artery tied; after looking in vain for other end, stuffed wound with gauze. Compression on cardiac side of vessel had been tried for 15 days in vain 1858	Yes	.....	Size of prune. Situated in temple. Thought it a cyst, but history revealed that child had cut his head some months before. A priest approximated edges of wound. Formerly tumor pulsated. Next day on re-examining tumor, Hall both felt and saw pulsation in it.

TABLE 12—Continued

NUM-BER	AUTHOR	AGE SEX SIDE	DURATION	OPERATION AND TREATMENT DATE	CURED	DIED	REMARKS
Operations for traumatic aneurisms, consecutive to wounds— <i>Concluded</i>							
22	Erichsen, J. E.	.....	.....	Incision sac, ligation at both poles 1861	Yes	.....	Followed arteriotomy.
23	Erichsen, J. E.	.....	.....	Incision sac, ligation at both poles 1861	Yes	.....	Succeeded arteriotomy.
24	Schuh in Wein- lechner, J.	21 M	6 weeks	1. Ligation effluent temporal, attempted ligation of its central end, as pulsation continued transverse facial also tied but without stopping beats, so next day injected perchloride of iron, without bringing about cessation of pulsation April 23, 1863 2. Ligation temporal artery to control hemorrhage from ruptured sac April 27, 1863	Yes	.....	Fell against pane of glass and cut head. Next day noise in ear. In front of ear tumor the size of a hazelnut.
25	Bryant	17 F L	11 weeks	Division artery; torsion of both ends April 2, 1872	Yes	.....	Fell and cut head. Tumor size of 3 penny piece which had burst with escape of much blood. Saw a partially divided artery in center of sac.
26	Tschudi	Man M L	Short time	Ligation sac at upper and lower poles 1884	Yes	.....	Struck with cane. Size of cherry seed. Tender on pressure and patient could not lie on left side.
27	Brandt, J.	37 M L	15 months	Ligation temporal artery; digital compression had been practised at intervals for 179 hours without benefit, patient then went to v. Eiselsberg who also tried local measures in vain January 11, 1891	Yes	.....	Cut temple. Buzzing in ear came on several days after accident. Diagnosis: traumatic aneurism temporal artery. v. Eiselsberg questioned accuracy of Brandt's diagnosis as regard vessel involved.
28	Edington, G. H.	14 M R	Some days	Excision, after ligation temporal artery above and below sac 1903	Yes	.....	Cut temple. Tumor $\frac{1}{2}$ inch in diameter.

29	Morestin, H.	40 F R	5 weeks	Excision sac, after ligation artery on each side of it November 23, 1912	Yes	.....	Tumor on anterior temporal artery result of an injury Pea-sized.
30	Exner, A. u. Massari, C. R. v.	27 M L	1 month	Excision sac, after ligation entering and emerging vessels December 2, 1912	Yes	.....	Nut-sized tumor near eye, consecutive to gunshot wound.
31	Haberer, H. v.	24 M R	2 months	Excision sac after central and peripheral ligation January 15, 1915	Yes	.....	Wounded, October 18, 1914; hazelnut-size aneurism on superficial temporal and cherry-stone aneurism on posterior branch.
32	Müller in Justi, K.	Man M R	59 days	Excision	Yes	.....	Consecutive to grenade wound; size of cherry seed.
33	Elsberg, C. A.	Man M R	2 weeks	Ligation external carotid artery April, 1918	Recurred	.....	Cut temple; noise in head. January 9, 1919, Dr. Robert T. Morris advised its removal. No further allusion to case.
34	Remedi in Novaro, N.	20 M R	1 month	Excision sac, ligation artery at upper and lower poles March 16, 1920	Yes	.....	Tumor; consecutive to bullet wound; size of goose-egg; patient had never had lues.
35	Winslow, N. and Edwards, M.	28 M L	1½ years	Excision sac, after ligation temporal artery below and its frontal and parietal branches above July 3, 1925	Yes	.....	Two sacs; one size of hen's egg, other of a pea; consecutive to a cut; no ill-effects.
36	Erb in Erb, K. H. u. Hahn, E.	21 M L	6 months	Excision sac, ligation vessels February 16, 1931	Yes	.....	Consecutive to a cut received in summer of 1930, while fencing; pea-sized, pulsatile swelling.
37	Elkin, D. C. and Campbell, J. L.	29 M L	3 weeks	Ligation external carotid artery, sac opened, clot evacuated and sac packed February 4, 1929	Yes	.....	Three weeks before admission, patient was stabbed just in front of the left ear with a knife. The wound which pulsated and enlarged to the size of a lemon. On examination a pulsating mass with bruit and thrill was found just in front of ear. Wassermann reaction was not recorded. Healing was complete in 14 days. The patient had not been seen since discharge.

TABLE 12—Continued

NUM- BER	AUTHOR	AGE SEX SIDE	DURATION	OPERATION AND TREATMENT DATE	CURED	DIED	REMARKS
Traumatic aneurisms, consecutive to wounds, treated conservatively							
38	Larrey, Baron D. J.	Man M L	Some days	Compression on aneurism	Yes	.....	Arteriotomy for cephalgia; pea-sized tumor.
39	Desruelles, H. M. J.	Man M	Short time	Compression 1822	Yes	.....	Arteriotomy for cephalgia; tumor size of pea. Appears to have been Larrey's case.
40	Desruelles, H. M. J.	M	Soon	Compression on trunk of temporal	Yes	.....	Consecutive to arteriotomy.
41	Desruelles, H. M. J.	Man M	Soon	Compression; sac burst and Larrey tried un- successfully to expose and to tie end of artery; bleeding arrested by cold applications	Yes	.....	Consecutive to arteriotomy; small tumor.
42	Uytterhoeven	32 M R and L	6 weeks	Compression to sac at intervals on repeated occasions 1834	Yes	.....	Admitted in middle of June, 1834, with encephalitis for which an arteriotomy was done upon both temporal arteries. August 4, a small tumor was noticed in vicinity of both operative sites which were con- sidered as aneurysma spurium circumscriptum. Tumor on left side was size of pea, that on right side somewhat larger. Bleeding from the sac on the right side was controlled on 3 occasions by pressure. Sep- tember 11, 1834, cure was regarded as complete. Says this is the second example of temp. aneur. consecutive to phlebotomy observed in St. Jean's Hospital. In both instances cure followed treat- ment by compression.
43	Magistel, A. J. L.	.....	.....	Compression	Yes	.....	Consecutive to arteriotomy
44	Houston	34 M L	5 weeks	Compression of sac with cork 1839	Yes	.....	Arteriotomy for inflammation of eye; size of nipple.

45	Chelius, J. M.	.....	.....	Compression	Yes	.....	Followed arteriotomy.
46	Mirault in Bouvier	9 M R	1 week	Compression on aneurism at intervals for 85 hours 1860	Yes	.....	Pecked by rooster; size of small apple. Exact location is so doubtful that some have classified it as an aneurism of external carotid artery. Bouvier located it at origin of temporal artery.
47	Fleming, W. J.	22 M L	6 weeks	Compression (subcutaneous); passed threaded needle under artery, tied emerging string over rubber tube and inserted wooden wedge between ligature and tube; its eradication by direct pressure had been tried but unsuccessfully June 24, 1881	Yes	.....	Cut temple above outer edge of eyelid; size of pea.
48	McNamara in Gross, S. D.	30	.....	.....	.....	.....	On anterior branch of temporal, caused by arteriotomy.
49	Holzwarth, E.	Man M L	3 months	.....	.....	.....	In front of ear consecutive to gunshot wound. Noticed constant blowing sounds.
50	Whiteford, C. H.	Man M R	4 months	Not treated 1917	.....	.....	In front of ear consecutive to bullet wound. Vague pains. If symptoms increased, aneurism was to be excised.

Operations for traumatic aneurisms, consecutive to contusions

51	Bartholin, T.	7 M L	Immediately	Incision sac, ligation central end of artery 1740	Yes	.....	Earliest recorded observation of temporal aneurism. Consecutive to blow on side of head with stick. Size of orange. Doctor incised swelling which imprudence was followed by severe hemorrhage. This was arrested with astringents.
52	Scarpa, A.	.....	.....	Incision sac, ligation central end of artery 1804	Yes	.....	Followed a blow.
53	Scarpa, A.	.....	.....	Incision sac, ligation central end of artery 1804	Yes	.....	Consecutive to a blow.

TABLE 12—Continued

NUM- BER	AUTHOR	AGE SEX SIDE	DURATION	OPERATION AND TREATMENT DATE	CURED	DIED	REMARKS
Operations for traumatic aneurisms, consecutive to contusions—Continued							
54	Gasté, S. F.	27 M L	1 month	Incision sac, threaded needle passed beneath temporal artery and tied to control escaping blood; compression of sac had been practised but had failed June 28, 1820	Yes	.....	Fell and struck forehead. Tumor half the size and shape of a bullet. July 1, secondary hemorrhage required the ligation of a small artery.
55	Drees, A. M. in Follin	44 F R	1 year	Ligation common carotid artery above omohyoid muscle; March 8, pulsation had reappeared but was much decreased in force; tumor only slightly diminished in volume February 25, 1839	Im- proved	.....	Fell and struck temple. Two months later, right eye began to protrude and eventually she lost sight in both eyes. Tumor size of hen's egg. Discharged, March 23, 1839, tumor smaller by a quarter and slightly pulsatile. Eight months later, the improvement continued.
56	Syme, J.	.....	.....	.....	.....	.....	Consecutive to contusion. Syme notes the best mode of procedure is to excise the sac and to tie the orifices of the vessel.
57	Barrier	30 F L	1 year	Ligation common carotid artery; aphonia and dysphagia supervened to clear up November 3, 1847	Yes	.....	Fell and struck temple. Tumor size of apple.
58	Frestel	Man M R	Some months	Excision sac, after ligation artery at entrance to and emergence from sac 1850	Yes	.....	Consecutive to blow with cane. Size of pigeon's egg. Some physicians mistook it for a cyst overlying temporal artery, but Frestel recognized its nature.
59	Jacobs	24 M R	2 years	Ligation temporal artery above and below sac; compression had been tried but in vain 1858	Yes	.....	Followed a fall. Tumor size of a pigeon's egg.
60	Fischer	Man M	1 year	Ligation afferent vessel and sac incised 1864	Yes	.....	Struck in temple with stick. Size of hazelnut.

61	Rocha, Castilla R.	15 M	.....	Ligation 1866	Yes	.....	Blow on head. Hazelnut-sized tumor near eye.
62	Deprés in Schutteelaere, G. de	45 M L	2 weeks	Excision, 3 arterial twigs tied, lowest came from trunk of temporal other 2 ascended to frontal region October 31, 1880	Yes	.....	Kicked in temple by horse. Nut-sized tumor appeared above eyebrow.
63	Notta, M.	64 M L	1 month	Incision sac, ligation of artery January 24, 1883	Yes	.....	Consecutive to blow. Another physician felt a fluctuating mass which he incised with escape of arterial blood. As lump did not decrease, incision repeated with same result. Tumor size of pigeon's egg. If patient bent head forward he felt bothersome pulsation in swelling.
64	Manz, O.	27 M R	2 years	Excision sac, after ligation artery on each side of aneurism November 11, 1895	Yes	.....	Struck in temple with fist. Tumor size of a hazelnut. Diagnosis: Aneurism of temporal artery. Manz says on p. 533 of the same article, we have also excised 2 false traumatic aneurisms of the temporal artery. He did not furnish any other information concerning these cases.
65	Robinson, B.	70 M L	5 weeks	Incision sac, ligation spouting artery 1895	Yes	.....	In epileptic seizure fell and contused temple. Tumor half size of a bantam's egg, fluctuated but did not pulsate and was regarded as a hematoma at first. Aneurismal character of swelling finally recognized.
66	Elmergreen, R.	27 M R	5 months	Ligation temporal artery below sac, ligation external carotid artery for rupture of sac 1897	Yes	.....	Hit by base-ball in temple. Size of hen's egg. Throbbing in head caused insomnia. Diagnosis offered no difficulty.
67	Horsley, J. S.	9 M L	1 month	Excision sac, after ligation artery above and below aneurism May 26, 1916	Yes	.....	Struck side of head against another's shoe. Growth $\frac{1}{2}$ inch in diameter. Pulsations were disagreeable. No luetic taint.
68	Horsley, J. S.	19 M R	8 months	Excision sac, after ligation artery above and below sac June 12, 1915	Yes	.....	Had never had any venereal disease. No history of hereditary syphilis. Struck in temple. Tumor $\frac{1}{2}$ inch in diameter.

TABLE 12—Continued

NUM- BER	AUTHOR	AGE SEX SIDE	DURATION	OPERATION AND TREATMENT DATE	CURED	DIED	REMARKS
Operations for traumatic aneurisms, consecutive to contusions—Concluded							
69	Erb in Erb, K. H. u. Hahn, E.	23 M R	55 days	Excision sac, after ligation entering and emerg- ing vessels September 9, 1930	Yes	.....	Followed a blow received in July, 1930, while fencing. Fourteen days later a pulsating tumor, size of a cherry-stone near outer angle of eye.
70	Erb in Erb, K. H. u. Hahn, E.	21 M L	3 weeks	Excision sac, entering and emerging vessels clamped and tied February 13, 1931	Yes	.....	Consecutive to a blow received in January, 1931, while fencing. Pulsatile, compressible tumor, size of a bean, above ear.
71	Elkin, D. C. and Campbell, J. L.	19 F R	1 month	Excision, after ligation of artery above and below sac; local anesthesia May 29, 1933	Yes	.....	One month before entrance patient fell against a wall and very soon thereafter she noticed a mass just over the right eye. This measured 1.5 cm. in diam- eter. It pulsed and harbored a thrill and a bruit. The pulsation could be stopped by compression of superficial temporal artery. The Wassermann reac- tion was negative. The woman left the hospital in a week and was well 2 months afterwards.
Traumatic aneurisms, consecutive to contusions, treated conservatively							
72	Palletta, G.	Man M R	16 days	Compression, 26 days 1783	Yes	.....	Struck head against wall. Small aneurismal tumor formed in temple which burst.
73	Cooper, A.	.....	.....	.....	.....	.....	Struck temple against corner of dining table.
74	Pétréquin, Is.	19 M L	1 month	Galvano-puncture, 2 needles inserted and con- nected with electric current; end of 12 minutes aneurism was solid September 10, 1845	Yes	.....	Consecutive to fall.
75	Malgaigne, J. F.	15 M L	2 weeks	Strangulation, 2 needles passed beneath each tumor and joined with a twisted suture; cen- tral end of artery handled in same way July 8, 1846	Yes	.....	Struck head while diving. Two tumors appeared on frontal branch, size of a pea. Malgaigne desired to practise electro-puncture but failing to make instru- ment work, adopted strangulation instead.

76	Benson	42 M L	1 week	Cold compresses and leeches 1841	Yes	.....	Struck temple against wall. Tumor at first red, swollen with many of characteristics of abscess. Later size of walnut. Diagnosis: Aneurism on anterior branch of temporal artery.
77	Holmes, T.	Man M	.....	Compression, self-administered on proximal end of vessel 1861	Yes	.....	Struck in temple with stone.
78	Rizzoli, F.	Man M L	.....	Compression (instrumental) 1835	Yes	.....	Fell and struck temple. Tumor size of nut.
79	Rizet	35 M L	5 years	Injection into sac 3 drops perchloride of iron, digital and mechanical compression also employed below sac May 11, 1873	Yes	.....	Consecutive to kick by horse. Form and volume of nut above external angular process.
80	Heineke, W.	.....	.....	.....	Yes	.....	A little larger than a pea. Consecutive to a contusion. Swelling finally became hard and eventually disappeared.
81	Symonds, C. J.	23 F L	1 year	1883	.....	.....	Struck temple against a box. Tumor, half an inch in diameter, in line of anterior branch of temporal artery. Possibility of syphilitic arteritis, he thought, could be ruled out. Proposed to treat by direct compression failing which he intended to excise sac.
82	Huettl, T.	M	6 weeks	.....	.....	.....	Fell and struck temple. Pulsating tumor appeared.
83	Heineke in Spruner-Merz, E. v.	24 M R	7 years	Acupressure and acupuncture	Yes	.....	Cuffed over eye; short time afterwards soft, elastic, pulsatile swelling appeared. In half a year had grown to size of a dollar. At times caused severe attacks of cephalgia, dizziness and pain in eye.

TABLE 12—Continued

NUM- BER	AUTHOR	AGE SEX SIDE	DURATION	OPERATION AND TREATMENT DATE	CURED	DIED	REMARKS
Operations for traumatic aneurisms							
84	Bergmann, E. v.	.....	.....	Excision 1900	Yes	.....	Small, of superficial temporal artery.
85	Bergmann, E. v.	.....	.....	Excision 1900	Yes	.....	Small, of superficial temporal artery.
86	Bergmann, E. v.	.....	.....	Excision 1900	Yes	.....	Small, of superficial temporal artery.
87	Richardson, E. P.	Man M	8 months	.....	.....	.....	Struck by piece of steel over anterior branch of tem- poral artery. Small swelling. Case had been diag- nosed as a congenital epidermoid cyst. He made the point that pulsation in a small tumor may be overlooked unless the possibility of aneurism be considered.
88	Campbell, J. L.	.....	.....	.....	.....	.....	Traumatic, anterior temporal in negro.
Operations for aneurisms, unclassified							
89	Monro, D.	.....	.....	Incision sac, ligation central end artery 1771	Yes	.....	Small.
90	Lisfranc	.....	.....	1845	.....	.....	Treated 2 patients so affected, presumably by ligation.
91	Lisfranc	.....	.....	1845	.....	.....	.....
92	Girouard	L	.....	Incision and insertion of chloride of zinc paste 1855	.....	.....	No larger than a filbert.

Aneurisms, unclassified, treated conservatively						
93	Pavesi, G.	M.	.....	Injection into tumor, 14 drops acetate of iron January 15, 1854	Yes	..... Tumor at external angle of eye, 4 cm. in diameter, blood aspirated.
Operations for arterio-venous aneurisms						
94	Green, J. H.	28 M L	5 years	Excision; artery and vein tied just above zygomatic arch; ligatures also applied to 2 branches into which temporal artery divided superiorly June 14, 1828	Yes	..... Uneasiness in temple from rapidly enlarging small aneurism 3 inches above zygoma consecutive to arteriotomy. Sac had ruptured on several occasions. Noise of pulsating artery was at times so great as to prevent sleep.
95	Stromeyer in Buckhardt, C.	19 M R	7 years	1. Ligation common artery by Chelius who had tried mechanical compression unsuccessfully; aneurism reappeared in 3 days January 18, 1837 2. Incision sac by Stromeyer; dilated vessel cleared at its lower end and doubly ligated May 3, 1842	Yes	..... Consecutive to wound in temple which was united by twisted suture. Roaring in ear. In front of ear nut-sized tumor. Unsuccessful attempt had been made in 1836 to ligate temporal artery.
96	Moore, C. H.	60 M L	36 years	Ligation artery and vein on cardiac side of lesion 1857	Yes	..... Followed arteriotomy. Peculiar sound in tumor audible both to bystander and to patient. In July, 1857, sac abscessed and burst. Some days later 2 severe hemorrhages occurred.
97	Langenbeck in Biefel	18 M L	1 year	Excision November 4, 1858	Yes	..... Cut temple. Tumor size of an egg. Bled from it on several occasions. Veins bulging, tortuous, size of finger. Both thrill and bruit present. Specimen showed a large sac which communicated by a narrow opening with the artery.
98	Skliassowski, N.	25 F L	.....	Ligation temporal artery below aneurism; ligation common carotid because pulsations continued; this resulted favorably for 3 weeks when movements reappeared; injection ferric perchloride 1869	Yes	..... Followed arteriotomy. Diagnosis: aneurismal varix.

TABLE 12—Continued

NUM- BER	AUTHOR	AGE SEX SIDE	DURATION	OPERATION AND TREATMENT DATE	CURED	DIED	REMARKS
Operations for arterio-venous aneurisms— <i>Concluded</i>							
99	Asplund	50 M	4 weeks	Excision, after all varieties of compression had failed 1871	Yes	.....	Consecutive to blow. Souffle bothersome.
100	Czerny, V.	30 M R	25 years	Excision and quadruple ligation 1880	Yes	.....	Cut with penknife. Large pulsating varices gradually developed.
101	Lister, J.	Man M	.....	Ligation temporal artery and vein 1881	Yes	.....	Size of large arterial trunk.
102	Walzberg u. Riedel	.....	4 weeks	Excision 1881	Yes	.....	Aneurismal varix from knife-wound.
103	Bergmann, E. v.	.....	.....	Excision after quadruple ligation 1900	Yes	.....	Has operated on only 1 case of arterio-venous aneurism between the temporal vessels.
104	Power	M L	.....	Excision after quadruple ligation May 27, 1913	Yes	.....	Consecutive to bullet wound. Temporal artery communicated with temporal vein by an intervening sac. Bleeding occurred from rupture of sac.
105	Pemberton, J. de J. in Yater, W. M. L.	38	9 years	Excision after ligation superficial temporals, right occipital artery and encirclement of fistula with hemostatic sutures December 31, 1926	Yes	.....	Consecutive to blow from falling tree. Humming heard in ears on wearing tight cap. Several large and tortuous veins diverging from a 3 x 4 x 1 cm. pouch. Blood drawn from a close-by vein had a 94 per cent oxygen content. X-ray of skull negative. Diagnosis: Arterio-venous aneurism of temporal. No effect on general circulatory system. Operation done solely for relief of local condition. The specimen revealed a small opening between the temporal artery and vein.

106	Morley, A. H.	35 M L	2 years	Ligation above fistula; an attempt was made to dissect out the sac with a view to ligating the temporal artery where it communicated with the aneurism but this could not be done owing to the thinness of the sac 1932	Yes	.....	Struck in temple with a stick. After a week, the swelling had completely subsided except for a small pulsating area. This gradually enlarged and caused throbbing and headache. Both bruit and thrill were present.
107	Elkin, D. C. and Campbell, J. L.	27 M R	9 days	Excision after quadruple ligation; sac exposed by transverse incision was found to be composed largely of a dilated vein March 30, 1933	Yes	.....	9 days before operation patient was stabbed just in front of right ear. The wound bled considerably and was treated by suture. When these were removed four days later, a painful swelling developed and he began to have a buzzing in the right ear. A pulsating tumor, the size of a walnut was found with thrill and bruit. The mass was obliterated by pressure below it together with the thrill and bruit. The patient left the hospital in 9 days and was well 2 months later.

Arterio-venous aneurism treated conservatively					
108	Bushe, G.	78 M R	9 months	None	Yes
				.....	Consecutive to arteriotomy for an apoplectic stroke. As it was not troublesome, no curative measures were undertaken. Autopsy: Communication between the temporal artery and vein.

Doubtful cases					
	Petit, J. L.	10 M	Short time	Incision, compression 1780	Yes
	Pelletan, Ph. J.	18 F L	.....	Ligation temporal artery, attempt also made to ligate occipital artery by transection with a needle but unsuccessfully. Had applied pressure over temporal artery but had to desist 1810	Yes
					Struck head against cellar steps. Pear-sized swelling. A one-quarter of an hour had not passed since the receipt of injury. Diagnosis: Pulsating hematoma.
					Tumor, pulsatile, extended from temporal region to vertex. Temporal and occipital arteries very large and tortuous. Autopsy: tumor formed of dilated and tortuous arteries. According to Chassagnac lesion was a circoid aneurism. Death due to exhaustion and repeated bleeding.

TABLE 12—*Concluded*

NUM- BER	AUTHOR	AGE SEX SIDE	DURATION	OPERATION AND TREATMENT DATE	CURED	DIED	REMARKS
Doubtful cases—Concluded							
Onderdonk, J.	F R	3 months	Not described 1814	Yes	.....	Struck temple against tin oven. Small tumor formed and increased for next 2 days. In 3 months had disappeared. Onderdonk believed it was occasioned by a rupture of the anterior branch of temporal artery. No pulsation evident at any time. Lesion has ear-marks of a hematoma.
MacLachlan, G. M.	30 M L	10 years	1. Ligation temporal artery; tumor reappeared but produced little uneasiness for 5 years 1815 2. Ligation temporal artery as it emerged from parotid gland; pressure had been tried but could not be endured; pulsation partially stopped July 10, 1825 3. Ligation common carotid artery July 11, 1825	.....	Yes	Pulsating swellings of a varicose nature in course of temporal, posterior auricular and occipital arteries. Not painful and only disturbance was violent throbbing which prevented sleep. Began after arteriotomy. Died 4 days after last operation. Autopsy: branches of carotid dilated, contorted tubes. Classed by Crisp and others as a circoid aneurism.
Brodie, B. C.	25 F R	20 years	Ligation, 4 vessels without benefit by Cooper June 1, 1826 Strangulation; passed 2 needles under tumor and wrapped silk around ends; before circulation was entirely under control had to pass doubly armed needle beneath vessel at upper end on October 18 and 20 and to tie 1 on each side October 15, 1928	Yes	.....	Struck head against bed-post causing pea-sized pulsating tumor in forehead. In 1821, as it had increased considerably, a surgeon attempted its cure by compression without success and in 1824, Cooper had a similar experience. Arnott had seen a case in which the temporal artery had been tied and failed and then the carotid had been secured without effect. It bore a great resemblance to the disease under discussion. The patient died in consequence of a jugular phlebitis. Considered by Crisp as a circoid aneurism.

Wardrop	22 M L	12 years	1. Ligation temporal artery by Babington without benefit 1827 2. Ligation common carotid artery above omohyoid; 3 weeks postoperatively pulsation barely perceptible at center of tumor March 4, 1827	..... Yes	Following blow, large, lobulated, pulsating tumor appeared in scalp. Temporal artery with branch from its fellow, posterior auricular and occipital enlarged, pulsated and communicated with lesion. Distressing pains and sensations in head. Autopsy: tumor consisted of a dilated artery. Classified by Wyeth and others as a circoid aneurism.
Syme, J.	30 F	10 years	Ligation posterior auricular artery 1828 Extirpation small false aneurism source of bleeding October 29, 1828	..... Yes	Tumor over mastoid size of a gooseberry. First thought it encysted. Posterior auricular enlarged and throbbing violently. Pressure had been tried but without success. Tumor also engaged posterior and middle branches of temporal. This is to all appearances an example of circoid disease.
Ruiz in Bérard, A.	38 M L	15 years	No treatment 1857	.....	Consecutive to blow from bottle. Series of dilated veins on side of head, pulsatile with thrill. Diagnosis questioned by Bérard who classed lesion as a circoid aneurism. Bruns (Handb. d. prakt. Chir., 1854) considered it an arterio-venous aneurism.
Wood, J.	37 M R	30 years	Strangulation, needles passed under vessels and a thick pad of India rubber placed over pins; pins also passed beneath tumor May 7, 1881	..... Yes	Pulsating tumor in parietal region just above ear. Size of hen's egg. Also tortuous, beating swelling that ran to root of nose. Although the condition is spoken of as an arterio-venous aneurism by the author, from its description it is a circoid aneurism.
Gallozzi, C.	29 M R	Excision, after coagulation, refrigeration and compression had been used without relief May 23, 1891 Yes	Struck in temple by a wooden ball. Buzzing in right ear. Pressure of cap caused headache. Tumor size of small nut surrounded by network of tortuous vessels. Temporal artery thrice its normal size. Probably an arterio-venous fistula and not a circoid aneurism.



LEONARD ERNEST NEALL, M.D.

BULLETIN

OF THE

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LEONARD ERNEST NEALE, A.B., A.M., M.D., LL.D.

Dr. Leonard Ernest Neale, emeritus professor of obstetrics in this University, died at his home, 853 Park avenue, Baltimore, on October 19, 1934. He had been in precarious health for several years; but, except for occasional spells of faulty heart action, he had been able to attend to his various tours of duty and pleasure. Two or three days before his death, he was stricken with heart failure on the street and had to be taken to his home in a cab. He realized that his end was near at hand and expressed his willingness to depart.

He was born at Port Tobacco, Maryland, on December 19, 1858, hence was almost 76 years of age at the time of his death. His early life was spent in the country where, doubtless, he availed himself of the abundant opportunities for hunting and fishing and developed a taste for outdoor sports and activities. Coming to Baltimore as a youth, he entered Loyola College and in due time graduated with the degree of A.B. He then entered the Johns Hopkins University, as a special student, where he studied under Professors Martin and Remsen, distinguished teachers of physiology and chemistry respectively.

After this preliminary training, he entered the Medical School of the University of Maryland and graduated in 1881, dividing first honors with the late erudite and versatile Dr. Charles W. Mitchell. He then went abroad and for about two years studied obstetrics under Schroeder, Winkel, Braun, Spaeth, Pinard and others in Vienna and other European centres.

Returning to Baltimore, in 1883, he was appointed by his uncle Dr. George W. Miltenberger, who was the professor of obstetrics in the University at that time, to the position of demonstrator of obstetrics and chief of clinic in the obstetrical department. He now undertook to establish an obstetrical hospital, in conjunction with his uncle,

which was located at 622 west Lombard street and where, for the first time in the history of the University, students were required to take actual care of parturient women, under the supervision of an instructor. Thus nearly fifty years ago, he established the magnificent obstetrical service, which exists today as a monument to his industry and ability. In 1893, he was elected professor of obstetrics in the College of Physicians and Surgeons but was recalled to his alma mater, in 1896, as the professor in that department. For twenty-seven years he continued to perform the duties of his chair and he retired in 1923 with the title of emeritus professor.

He was not a prolific writer but early in his experience he translated a German work on obstetrics which was used by his own students and others. He, also, devised an obstetrical forceps on the axis traction principle that was an improvement on the usual style of rigid handled instruments. He was a skilled obstetrician and enjoyed the confidence of a large clientele. There is at this time in the Museum of the University of Maryland, a sagittal section of a woman's torso with a full term foetus in her womb, showing the head of the child in the usual position for a normal labor. This is a fine and instructive preparation made by Dr. Neale or under his direction, an illustration of which forms the frontispiece of Dr. John Whitridge Williams' book on obstetrics. He was a most entertaining lecturer and teacher and was a conversationalist of rare charm.

On the occasion of the twenty-fifth anniversary of his election as professor of obstetrics in the University of Maryland, he was given a large banquet by his colleagues and friends, at which he made a characteristic and humorous address. After his retirement from his chair, he soon gave up practice and lived a life of more or less quietude, spending much time at his cottage at Ocean City, Maryland. It was on his porch at Ocean City that the writer last saw him and had a pleasant visit with him. He then seemed to be in fair health but five or six weeks later he answered to the last call.

RANDOLPH WINSLOW.

DR. WILMER BRINTON

Dr. Wilmer Brinton was born at Oxford, Pennsylvania, March 15, 1854, and died at Baltimore, Md., February 12, 1934. He was of Quaker parentage and received his education in the public schools and at Lambs, now Friends School, in Baltimore.

After his graduation at the University of Maryland School of Medicine in 1876, he immediately proceeded to improve himself by courses of study in European universities and clinics, which, at that time,



DR. WILMER BRINTON

offered better facilities than the American schools and hospitals. He was particularly attracted to obstetrics and on his return to Baltimore, he became almost at once a popular and successful practitioner of medicine and was considered especially efficient as an obstetrician. At the beginning of the Baltimore Medical College, Dr. Brinton was appointed Professor of Obstetrics and remained at the head of the department until 1900.

The writer remembers Dr. Brinton as a vigorous, forceful and interesting teacher with a great sense of responsibility, anxious to give his students a knowledge of the rudiments of obstetrics and entirely unsympathetic to any apparent irresponsibility or carelessness on the part of any of his students or assistants. He was never late to an appointment, and was a hard worker and a good citizen. Always interested in the improvement of medical education, during his term of service at the Baltimore Medical College, he was constantly attempting to elevate the standards of medical education in that institution.

Dr. Brinton was largely instrumental in initiating and completing the building now known as the Maryland General Hospital. It was built in 1892-1893 and until 1913 housed both the Baltimore Medical College and the Maryland General Hospital. He will be remembered by his students, patients and friends as a strong and vigorous personality, a good teacher, and an outstanding citizen and member of the medical profession.

J. M. H. ROWLAND.

PROCEEDINGS

OF THE

UNIVERSITY OF MARYLAND BIOLOGICAL SOCIETY

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FERD. A. RIES, *Secretary*

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HARVEY G. BECK, C. O. APPELMAN, EDUARD UHLENHUTH, E. VANDEN BOSCHE, *Councillors*

The Fifty-seventh Program Meeting of the University of Maryland Biological Society was held on Tuesday, February 27, 1934, at 8.15 P. M. in the Chemical Amphitheatre of the University of Maryland Medical School. The Secretary, Dr. F. A. Ries, presided. Below are abstracts of papers presented by members of the staff of the Department of Pharmacology of the University of Maryland:

THE INFLUENCE OF INSULIN-FREE PANCREATIC EXTRACT ON THE GASEOUS EXCHANGE OF THE WHITE RAT

BY C. JELLEFF CARR,* JACOB E. SCHMIDT, WILLIAM G. HARNE, AND JOHN C. KRANTZ, JR.

Department of Pharmacology, University of Maryland Medical School

An insulin-free pancreatic extract, shown to be an epinephrine antagonist on blood pressure was studied on the metabolism of the white rat. The increased oxygen consumption produced by the injection of epinephrine was not antagonized by injections of insulin-free pancreatic extract. The substance was observed to produce definite hypoglycemia in rabbits.

UTILIZATION OF INULIN FROM ARCTIUM LAPPA AND CERTAIN SOLUBLE INULINS BY THE RAT

BY C. JELLEFF CARR* AND JOHN C. KRANTZ, JR.

Department of Pharmacology, University of Maryland Medical School

Most inulins, including that from *Arctium Lappa*, are insoluble in cold water. Recently certain inulins have been obtained from *Camas Roots* and the *Wild Onion*. These inulins were fed to the white rat and the degree of metabolism compared with that of the inulin of *Arctium Lappa*. In the white rat, the absorption and utilization of the insoluble inulin of *Arctium Lappa* and the soluble inulins from *Camas* and the *Wild Onion* showed no significant difference.

* Emerson Fellow in Pharmacology.

THE STABILITY AND HYDROGEN-ION CONCENTRATION OF TINCTURE OF DIGITALIS

BY C. JELLEFF CARR* AND JOHN C. KRANTZ, JR.

Department of Pharmacology, University of Maryland Medical School

The hydrogen-ion concentration of a large series of U. S. P. tinctures of digitalis was shown to be approximately pH 5.7. When dehydrated alcohol was substituted for 80 per cent alcohol in the preparation of the tincture the pH dropped to about 4.0 with a loss of potency between 50 and 150 per cent of the original value. This loss in potency was shown to be due to the inability of the dehydrated alcohol to effectively extract the glucosides.

The Fifty-eighth Program Meeting of the University of Maryland Biological Society was held Tuesday, April 10, 1934, at 8.00 P. M. in the Chemistry Building, University of Maryland, College Park. Dr. Krantz presided. Two papers were delivered at the meeting. The first paper, "The Structure and Function of the Microconidia of *Sclerotinia Fructicola*," was presented by Dr. J. W. Heuberger of the Department of Botany of the University of Maryland, College Park. Unfortunately, an abstract of this paper is not available. The second paper was presented by Dr. H. S. Rubinstein. Below is an abstract of the paper:

THE EFFECT OF THE GROWTH HORMONE ON BRAIN WEIGHT-BODY WEIGHT RELATIONS

BY H. S. RUBINSTEIN, B.S., M.D., PH. D.

Neuro-Anatomical Laboratory of the Department of Anatomy, University of Maryland Medical School

Using the adult white rat (*Mus norvegicus albinus*) for these experiments, seventy-four animals were divided into three groups: 1, test rats; 2, uninjected controls; and 3, injected controls. The test group was injected intraperitoneally daily (except Sunday) with an aqueous alkaline extract (prepared in this laboratory) of the anterior lobe of the beef pituitary gland; the "injected control" was subjected to a beef extract prepared and administered similar to that of the growth hormone.

All animals were maintained in similar surroundings and injections carried on for twenty-two weeks during which time weekly growth changes were observed. The animals were then sacrificed by bleeding and weighed, measured and x-rayed. The brains were recovered and gravimetric, volumetric and specific gravity determinations made. In addition, the brains of a smaller series of animals similarly divided and treated were subjected to dessication and their water and solid contents determined. All observations were recorded and subjected to statistical analysis.

The result of such experimentation showed that while the test rats gained significantly in body weight and proportions over the two sets of controls, the brains of all animals remained unaltered. This, therefore, resulted in an alteration of the normal brain weight-body weight relations in the test animals which was manifested by a lowering of the brain weight-body weight ratio, a diminished exponent of rela-

* Emerson Fellow in Pharmacology.

tion and a definite deviation from the theoretical brain weight as determined by the Hatai formula.

The Fifty-ninth Program Meeting of the University of Maryland Biological Society was held on Tuesday, May 1, 1934, at 8.15 P. M. in the Chemical Amphitheatre of the University of Maryland Medical School. Dr. John C. Krantz, Jr. presided. Below are abstracts of the papers presented to the Society:

NERVOUS CONTROL OF THYROID ACTIVITY

BY EDUARD UHLENHUTH, PH.D., EDGAR VAN SLYKE, PH.D., FRANK H. J. FIGGE, PH.D., AND KARL MECH, B.S.

From the Department of Gross Anatomy, University of Maryland School of Medicine

The experiments reported in this paper were undertaken to show whether the nervous system takes any part in regulating the activity of the thyroid gland. Amphibian metamorphosis was used as an indicator of thyroid function. Pilocarpin and adrenalin were used as stimulators of the parasympathetic and sympathetic nervous systems respectively and thyreo-activator hormone extracted from the prehypophysis of cattle was used to activate the thyroid glands. The species of animals used are the larvae of the tiger salamander.

In control series "a" the larvae were injected with Ringer solution. In series "b" they received injections of thyreo-activator alone; in series "c" pilocarpin and in series "d" adrenalin was added to the thyreo-activator injections.

The animals of group "a" did not transform. The animals of group "b" transformed after 15 injections; addition of pilocarpin to thyreo-activator, in series "c", metamorphosed the larvae after $7\frac{1}{2}$ injections of thyreo-activator. Addition of adrenalin, in series "d" produced metamorphosis after $10\frac{1}{2}$ injections. A second experiment gave a similar result.

It is evident that pilocarpin as well as adrenalin sensitize the animals to the metamorphic action of thyreo-activator. Experiments are in progress to further analyze these results.

A STUDY OF THE COMPARATIVE PHYSIOLOGY OF THE GLOSSO PHARYNGEAL NERVE RESPIRATORY REFLEX IN THE RABBIT, CAT, AND DOG

BY HARRY A. TEITELBAUM, B.S., AND F. A. RIES, M.D.

Department of Physiology, University of Maryland Medical School

Stimulation of the central end of the glossopharyngeal nerve is described in most text books as having an inhibitory effect on respiration. This concept is derived from the work of Marchwald (1887), who had limited his studies to the rabbit entirely. Marchwald's observations were confirmed by us in the rabbit, in which animal central glossopharyngeal stimulation invariably inhibits respiration. Following the respiratory pause which only lasts a few seconds there may be a slight acceleration in rate; but no increase in the amplitude of the respiratory excursion has been observed in the rabbit.

In the cat, stimulation of the central end of the glossopharyngeal nerve is usually followed by a deep inspiration; and then a series of short gasps, which are indicative of an incomplete inhibitory phase. The rate of the gasps is faster than that of normal respiration. Often the gasping phase is followed by markedly accelerated and deepened respiration. In some cases the response is purely one of respiratory acceleration. Rarely is their inhibition without acceleration. The response, whatever its nature, was found to be unilateral in several cats.

Stimulation of the central end of the glossopharyngeal nerve in the dog gives variable responses. In some animals the respiratory changes are sluggish and indefinite. In other animals, they are well marked. Both inhibition and acceleration of respiration are elicitable even from one glossopharyngeal nerve if the several branches are stimulated separately. An inhibitory response may or may not be followed by acceleration. In some dogs only acceleration is evident; and this may involve extreme increase in respiratory amplitude.

Of the three species studied, the rabbit gives the most constant response; the response of the cat is less constant, but on the average most marked; while in the dog the effect is the least constant.

The Sixtieth Program Meeting of the University of Maryland Biological Society was held on Tuesday, May 29, 1934, at 8.15 P. M. in the Chemical Amphitheatre of the University of Maryland Medical School. Dr. John C. Krantz, Jr. presided. Below are abstracts of the papers presented:

THE INFLUENCE OF ISOMANNIDE ON EXPERIMENTAL ANIMALS

BY WILLIAM E. EVANS, JR., C. JELLEFF CARR,* AND JOHN C. KRANTZ, JR.

Department of Pharmacology, University of Maryland Medical School

Isomannide was prepared from mannitol by dehydration. The compound represents mannitol from which two molecules of water have been removed. The substance failed to give rise to the storage of additional glycogen in the livers of white rats. It was without influence on the respiratory quotient. The ingestion of this substance tended to reduce the tissue-glycogen content of white rats. The blood-sugar level of rabbits was unaffected by the oral administration of isomannide. Essentially the experimental animals exhibited their inability to metabolize isomannide in contrast to the ease with which mannitol is utilized.

PHARMACOLOGICAL AND CHEMICAL STUDIES OF THE DIGITALIS GROUP, NAMELY, ADONIS, APOCYNUM AND CONVALLERIA

BY JAMES C. MUNCH, MARGARETHE OAKLEY, C. JELLEFF CARR,*
AND JOHN C. KRANTZ, JR.

Department of Pharmacology, University of Maryland Medical School

The one-hour-frog method of assaying digitalis and its preparations was applied to Apocynum, Adonis and Convallaria. Great variations in the heart-tonic potency were observed. There existed no proportionality between the value obtained by

* Emerson Fellow in Pharmacology.

the frog assay and the effective therapeutic dose of Apocynum, Adonis and Conval-laria preparations. The Knudson-Dresbach chemical method of assaying digitalis preparations was tried with the preparations of these three drugs. Nonconcordant results were obtained, indicating the inapplicability of the chemical method to Apocynum, Adonis and Convallaria.

THE DIFFERENTIAL REACTION OF BRANCHIAL VESSELS TO ADRENALIN, OXYGEN AND CARBON DIOXIDE

BY FRANK H. J. FIGGE, PH.D.

Department of Gross Anatomy, University of Maryland Medical School

A study of the process of gill reduction suggested that this process might be closely related to the vascular reactions of the branchial vessels. The investigation of these reactions led to the discovery that in one gill arch there are two sets of blood vessels. One dilates and the other constricts when treated with adrenalin. It was shown quantitatively by perfusion of isolated parts of a gill arch, and qualitatively by direct observation on the branchial vessels of an intact animal, that adrenalin produces an extreme dilatation of the branchial capillaries while it constricts the anastomotic arterioles at the base of the gill.

The effect of changes in oxygen and carbon dioxide tension of the blood supplying the gills was also tested. When the gills are supplied by blood with a high carbon dioxide content, the two sets of vessels show the same differential reactions as with adrenalin. The gill capillaries dilate while the short-circuiting anastomotic arterioles at the base of the gill constrict. The reactions of the two sets of vessels are antagonistic with reference to their diameters; but they are synergistic with regard to the physiological result. All the blood must pass through the gill filaments to be oxygenated and very little if any blood is short-circuited to the dorsal aorta by passing through the anastomotic arterioles at the base of the gill.

When the gill vessels are supplied with oxygenated blood, the two sets of vessels again react in a differential manner. The reactions, however, are just the reverse of those produced by carbon dioxide. Oxygenated blood dilates the short-circuiting arterioles, and constricts the gill capillaries. Both reactions are again synergistic in that both tend to inhibit the flow of oxygenated blood through the gill.

The Sixty-first Program Meeting of the University of Maryland Biological Society was held Friday, October 19, 1934, at 8.00 p.m., in a lecture room of the Engineering Building at College Park. Dr. John C. Krantz, Jr., presided at the meeting. The meeting was preceded by a dinner, at which the speaker of the evening, Dr. Carl Voegtlin, Pharmacologist Director, United States Public Health Service, was the guest of honor.

After the dinner, Professor Voegtlin presented before the Society the work by him and his associates on normal amoeba proteus and malignant Jensen sarcoma cells. The title of the paper was "Chemical Factors Concerned in the Growth and Division of Cells."

Dr. Voegtlin reported that the size of the Jensen sarcoma cell (rat) can be used as a criterion of age and that the nuclear mass during mi-

tosis increases in volume out of proportion to either the gross structure or the cytoplasm. Glutathione stimulates cell growth and mitosis, especially stimulating the nuclear mass. Cupric chloride and hydrocyanic acid antagonize the action of glutathione; ethyl ether, in small concentrations to some extent lengthens the process of mitosis. These processes are not affected by carbon monoxide, hydrogen peroxide, methylene blue, and arsphenamine containing trivalent arsenic. Only during the prophase did cupric chloride, etc., have the ability to inhibit mitosis. It was suggested that after the prophase had progressed the cytoplasm protected the nucleus from the action of these substances. Dr. Voegtlin pointed out also that as utilizable sugars are oxidized the rate of oxidation is increased as the pH is decreased, i.e., as the H-ion concentration is increased.

An interesting feature of the research was that individual cells were studied rather than cells en masse.

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The names listed above are officers for the term beginning July 1, 1934, and ending June 30, 1935.

ITEMS

The first staff meeting in the new University Hospital was held on Monday, November 19, 1934, at 8 p.m. in the clinical amphitheatre. The program was as follows:

1. Report of Interesting Gynecological Patients. Dr. Leo Brady.
2. Short Discussions on Plans for the New Hospital. Drs. W. S. Gardner, Arthur M. Shipley, M. C. Pincoffs and J. M. H. Rowland.

Dr. T. Nelson Carey, Baltimore, Md., class of 1927, is secretary of the medical staff of the University Hospital.

Dr. Frank S. Lynn, Baltimore, Md., class of 1907, professor of clinical surgery, University of Maryland, is the president of the medical staff of the University Hospital.

Dr. George O. Sharrett, Cumberland, Md., B. M. C., class of 1908, is president of the Medical and Chirurgical Faculty of the State of Maryland. He specializes in ophthalmology, otology, laryngology and rhinology.

Dr. Fred H. Heise, Trudeau, N. Y., class of 1907, is medical director of the Trudeau Sanatorium, Saranac Lake, N. Y.

Dr. Abraham Simon Rothberg, New York, N. Y., class of 1926, published in the October issue of the New York State Journal of

Medicine, a paper entitled "Calcified Vessels of the Lower Extremities of a Young Man: Case Report." Dr. Rothberg limits his practice to orthopedic surgery.

Dr. W. Lee Hart, Omaha, Neb., class of 1906, Colonel, M.C., U. S. Army, has been ordered to duty in the Philippine Islands.

The following alumni are colonels in the Medical Department of the United States Army, William N. Bisphan, class of 1897; J. Ralph Shook, class of 1899; Roger Brooke, B. M. C., class of 1900; Perry L. Boyer, class of 1899; Frank W. Weed, class of 1903; William A. Wickline, P. & S., class of 1895; William Lee Hart, class of 1906; Arnold Dwight Tuttle, class of 1906 and Taylor Darby, class of 1904.

Dr. Herbert Berger, Staten Island, N. Y., class of 1931, announces the location of offices for the practice of medicine and surgery at 7474 Amboy Road, Tottenville, Staten Island, N. Y.

Dr. Elias Freidus, Long Beach, N. Y., class of 1922, has been engaged in the practice of pediatrics with offices at 322 West Walnut street. After graduating as one of the honor men of his class, he interned at the Lennox Hill Hospital, New York, N. Y., and the Children's Hospital, Washington, D. C. Returning to New York, he associated himself in practice with Dr. Herman Schwartz, attending pediatricist to the Mt. Sinai Hospital. He was formerly adjunct attending pediatrician to the Sydenham Hospital, assistant in pediatrics at the Mt. Sinai Hospital (outpatient department), and associated with the New York Diet Kitchen Association for many years. At the present time, he is the attending pediatrician to the Long Beach Hospital, Commissioner of Health of Long Beach, and medical director of the Long Beach Public Schools. This winter, he is establishing a winter office at 1260 Collins Street Avenue, Miami, Fla., and shall be glad to meet any alumnus coming to Florida for the winter.

Dr. Moses Gellman, of the orthopedic department, presented a paper entitled "Suggestions for a More Accurate Localization of the Sacroiliac Joint," and "Tuberculosis of the Hip," before the meeting of the Eastern States Orthopedic Club, held in Baltimore, October 25-27, 1934; Dr. George E. Bennett, Baltimore, Md., class of 1909, spoke on "Just a few Odds and Ends—Giant Cell Tumor of the Patella, Transplant of the Fibula, Operative Treatment of Club Hands, Stabilization of the Scapula, Congenital Fractures, Metastatic Giant-cell Tumor"; Dr. Harry Lee Rogers, Baltimore, Md., P. & S., class of 1915, discussed "The Operative Results in Cavus Deformities; Results from Stabilization in Poliomyelitis"; Dr. Albertus Cotton, Baltimore, Md., P. & S., class of 1896, professor of orthopedic surgery and roentgenology, University of Maryland, on "Foot Stabilization and Shoul-

der Arthrodesis," and Dr. Allen F. Voshell, professor of Orthopedic Surgery, University of Maryland, read a paper entitled "Pseudo-hypertrophic Muscular Dystrophy."

Dr. Edgar E. Noel, Huntington, W. Va., P. & S., class of 1884, celebrated on May 4, 1934, the fiftieth anniversary of his entry upon the practice of medicine. Dr. Noel is 75 years old. It is believed that his long career in his profession makes him one of West Virginia's oldest doctors in point of view of continuous service. He is the son of a physician—Dr. Norborne William Noel—who served with distinction in the medical corps of the Confederate Army during the Civil War. Following his graduation, Dr. Noel first located at Green Sulphur Springs, in Summers County, West Virginia. Later he removed his offices to Thurmont. In 1895, he moved to Sun where he remained for five years. He then returned to Green Sulphur Springs where he remained until 1914, when he moved to Huntington. Dr. Noel celebrated his 75th birthday, November 3, 1934.

Dr. Allen F. Voshell, professor of orthopedic surgery, University of Maryland, read a paper entitled "Low Backaches," before the Ohio County Medical Society, at the Ohio Valley General Hospital, Wheeling, W. Va., on November 9, 1934.

Dr. Fred W. Rankin, Lexington, Ky., class of 1909, presented a paper entitled "The Treatment of Hirschsprung Disease," before the International Medical Assembly (Inter-state Postgraduate Medical Association of North America), at its meeting in Philadelphia, Pa., November 9, 1934.

Dr. H. S. Rubinstein, Baltimore, Md., class of 1928, announces the limitation of his practice to neurology and endocrinology. His office is located at 2226 Eutaw Place.

Dr. George Conrad Halley, Chicago, Ill., class of 1902, has been appointed county health officer for Talbot county, Md.

Dr. Dudley Pleasants Bowe, of the department of obstetrics has removed his offices from 904 N. Charles St., to 2 W. Read St., Baltimore, Md.

Dr. George J. Snoops, Jr., Central Islip, Long Island, N. Y., class of 1930, and his wife, Thelma Caldwell, R. N., University of Maryland Hospital Training School for Nurses, class of 1933, are receiving congratulations upon the birth of a son, George J. Snoops, the third, on August 6, 1934.

DEATHS

- ANDERSON, HENRY WATKINS, Covington, Va.: B. M. C., class of 1887; formerly councilman and county coroner; aged 78; died, September 4, 1934, of thrombosis.
- BLAKE, GROVER CLEVELAND, Cumberland, Md.; P. & S., class of 1910; fellow of the American College of Surgeons; aged 50; died, recently, of gastric carcinoma.
- BOBBITT, EMMETT L., Franklinton, N. C., class of 1887; aged 81; died, July 30, 1934.
- BRANHAM, JOSEPH HENRY, Baltimore, Md.; P. & S., class of 1879; at one time professor of clinical surgery in the University of Maryland; aged 77; died, August 19, 1934, of bronchopneumonia.
- CAUSEY, THOMAS WILLIAM, Lakeland, Fla.; P. & S., class of 1909; aged 57; died, September 18, 1934, of coronary occlusion.
- COFFMAN, HARRY FRANKLIN, Keyser, W. Va.; P. & S., class of 1913; formerly secretary of the Grant-Hampshire-Hardy-Mineral Counties Medical Society; aged 51; died, October 9, 1934, of septicemia consecutive to an infected tooth.
- COLLENBERG, JOHN HENRY, Baltimore, Md.; class of 1879; aged 82; died, November 13, 1934.
- DUTTON, BENJAMIN BLAKE, Washington University School of Medicine; class of 1872; aged 83; died, July 6, 1934, of cardiac disease.
- EDDLEMAN, HALL M., Gastonia, N. C.; P. & S., class of 1886; aged 76; died, September 23, 1934, of nephritis.
- HAMMOND, ROBERT LEE, Frederick, Md.; class of 1882; aged 72; died, August 20, 1934, of chronic nephritis, arteriosclerosis and myocarditis.
- HEADING, JOHN MAXWELL, Johnstown, Pa.; P. & S., class of 1886; aged 78; died, August 15, 1934, of chronic myocarditis.
- HOYT, RALPH L., Christiana, Pa.; B. M. C., class of 1898; aged 58; died, October 2, 1934, of cardiac disease.
- HUGHES, DON C., Findlay, Ohio; P. & S., class of 1893; aged 63; died, September 25, 1934, of cerebral hemorrhage.
- HUGO, JOHN GEORGE, New Haven, Conn.; P. & S., class of 1903; served during the World War; aged 58; died, November 11, 1934, following a short illness. He was born at New Haven and received his early education at the Hopkins Grammar School and Hillhouse High School. During the World War, he served as the commanding officer of the medical detachment of the 102nd infantry with the rank of major. He was very popular with the members of that outfit. He rendered personal attention to the sick and injured under his care. This personal touch endeared him to the rank and file of the regiment.
- KILBOURN, JOSEPH AUSTIN, Hartford, Conn.; P. & S., class of 1897; aged 73; died, October 13, 1934, of a hemorrhage consecutive to a ruptured esophageal varix.
- KING, CHARLES A., Sussex, N. B., Canada; P. & S., class of 1904; aged 59; died, June 11, 1934.
- KNELL, WILLIAM A., Baltimore, Md.; class of 1905; aged 50; died, November 14, 1934, of a lingering illness. He received his early education at St. Martin's Male Academy, and was awarded a bachelor of arts degree by Mt. St. Joseph's College in 1901.
- KUHN, ANNA LOUISE, Baltimore, Md.; B. M. C., class of 1883; aged 74; was found dead, October 7, 1934, of cerebral hemorrhage.
- LATIMER, CHARLES HARRIS, Laurel, Md.; P. & S., class of 1881; aged 73; died, July 29, 1934, of cardiac disease and arteriosclerosis.
- LONG, LEVI SAMUEL, St. Joseph, Mo.; B. M. C., class of 1892; aged 62; died, August 10, 1934, of cerebral hemorrhage.
- LUMPKIN, ROBERT GARRETT LEE, Baltimore, Md.; B. M. C., class of 1892; aged 63; died, October 8, 1934, of suicide by hanging.
- MACGILL, JOHN CHARLES, Catonsville, Md.; class of 1891; aged 64; died, November 16, 1934. He was a son of the late Dr. Charles C. W. Macgill, class of 1856; born at Hagerstown, Md., May 10, 1833; practised at Hagerstown, 1856-1862; surgeon, Second Virginia Infantry, Confederate States Army, 1862-1865; settled at Catonsville, Md., 1865; vice-president, Medical and Chirurgical Faculty of the State of Maryland, 1889-1890; president, First National Bank,

- Catonsville, and a grandson of the late Dr. Charles Macgill, class of 1828; born at Baltimore, Md., 1806; graduated from Baltimore College, 1823; pupil of Dr. Charles G. Worthington, of Elkridge, Md.; resident physician Alms-house; practised at Martinsburg; later at Hagerstown, Md.; a founder of Hagerstown Mail, 1828; later of Martinsburg Republican; visitor to West Point, 1839; presidential elector for Van Buren, 1840; Major-General Maryland Militia; arrested and confined in Northern forts, 1861-1862; Surgeon, Confederate States Army, 1863-1865; after the Civil War settled at Richmond; died at Mineola, Chesterfield County, Va., May 5, 1881.
- MATTFELDT, CHARLES LOUIS**, Catonsville, Md.; class of 1886; a former commissioner of Baltimore County, Md.; at one time county health officer; aged 67; died, October 27, 1934.
- MCCLEARY, STANDISH**, Baltimore, Md.; P. & S., class of 1890; professor of pathology and clinical medicine at the University of Maryland; aged 64; died, November 19, 1934, of cardiac disease. Dr. McCleary was pathologist at the Mercy Hospital and associate pathologist at the University Hospital. He was born at Baltimore, in 1870, and was educated in the public schools here. After receiving his medical degree, he became in succession professor of histology and pathology and professor of pathology and clinical medicine at the University. He was visiting physician to both the Mercy and University Hospital, a member of the medical council of the University of Maryland and a member of the board of governors of Mercy Hospital, and a post-mortem examiner of Baltimore City, for many years.
- MCDERMOTT, BERNARD FRANCIS**, Los Angeles, Calif.; P. & S., class of 1897; aged 61; died, June 8, 1934, of cerebral thrombosis and chronic nephritis.
- MITNICK, JACOB H.**, Baltimore, Md.; B. M. C., class of 1890; veteran of the Spanish-American and of the World Wars; aged 76; died, September 22, 1934, of arteriosclerosis, diabetes mellitus and coronary thrombosis.
- MOORE, JOHN L.**, Richmond, Va.; P. & S., class of 1886; served during the World War; aged 70; died, September 8, 1934, of coronary thrombosis.
- NEALE, LEONARD ERNEST**, Baltimore, Md.; class of 1881; professor emeritus at his alma mater; fellow of the American College of Surgeons; aged 75; died, October 19, 1934, of cardiac disease. Dr. Neale was one of the foremost authorities on obstetrics in the country. He had been ill a year prior to his death. Born at Port Tobacco, Md., in Charles county, on December 19, 1858, Dr. Neale was a descendant of archbishop Leonard Neale. At the age of 12, he moved to Baltimore and later entered Loyola College whence in due time he was awarded the degree of A.B. and later the honorary degree of LL.D. After graduating from Loyola College, he entered the Johns Hopkins University, as a special student in biology and chemistry. He was graduated from the Medical School of the University of Maryland in 1881, where he shared first honors with the late Dr. Charles W. Mitchell. Dr. Neale was a picturesque character, a wonderful teacher, an expert obstetrician, an entertaining conversationalist. He organized the out-patient department of the obstetrical department and founded the maternity hospital. The University is greatly indebted to him for these services.
- PEARSON, CHARLES LUSBY**, Newton, Mass.; class of 1883; aged 73; died, September 8, 1934, of coronary thrombosis and gastric ulcer with hemorrhage.
- RODWELL, JOHN W.**, Mocksville, N. C.; P. & S., class of 1895; aged 68; died, August 12, 1934, of nephritis.
- SATTERTHWAITE, THOMAS EDWARD**, New York, N. Y.; College of Physicians and Surgeons in the City of New York, medical department of Columbia College (1867); fellow and founder of the American College of Physicians; served in the Franco-Prussian War; one of the founders and formerly secretary, vice-president, professor of pathologic anatomy and general medicine, Post-Graduate Medical School; lecturer on comparative pathology, Columbia Veterinary College (1881-82); organized the medical and surgical staff of the Columbus Street House of Relief, now the Hudson Street Hospital, in 1875; a founder and president of Babies' Hospital (1894-1899); microscopist and later pathologist of St. Luke's Hospital (1872-1882); pathologist to the Presbyterian Hospital (1873-1888); consulting physician to the Post-graduate, Orthopedic and Manhattan State Hospitals; served as a 1st lieutenant in the United States Army Reserve Corps (1911-1917); author of "Manual of Histology, etc."; aged 91; died, September 19, 1934, of senility. Although Dr. Satterthwaite was not a graduate

of the University of Maryland, he delivered a number of lectures at the University on various occasions and was intensely interested in the welfare of the University of Maryland. In 1903, when speaking before the University of Maryland Medical Society, he presaged a great development of the University in the near future. His predictions are beginning to be realized and should soon be fulfilled.

- SCANLON, EDWARD FRANCIS, Scranton, Pa.; P. & S., class of 1890; aged 78; died, August 21, 1934.
- SHAEFFER, CHARLES ALEXANDER, Lees Creek, Ohio; B. M. C., class of 1893; aged 67; died, August 15, 1934, carcinoma.
- SCHWARTZ, WILLIAM F., Baltimore, Md.; class of 1907; formerly physician to the Maryland Penitentiary and more recently associated with the board of city charities; resident physician at Bay View Hospital in charge of the insane department from 1908 to 1911; a graduate of Loyola College (Baltimore); aged 47; died, October 25, 1934.
- STALEY, THOMAS MASON, Bicknell, Ind.; B. M. C., class of 1903; served during the World War; aged 55; died, September 28, 1934, of valvular cardiac disease.
- STICK, HENRY LOUIS, Canandaigua, N. Y.; P. & S., class of 1900; member of the American Pediatric Society and of the New England Society of Psychiatry; served during the World War; on the Staff of the Veterans' Administration Facility; aged 61; died, August 15, 1934, of cerebral hemorrhage.
- TILLOTTSON, HOMER JOHN, Los Angeles, Calif.; P. & S., class of 1880; aged 77; died, September 3, 1934.
- VAN DERLYN, J. DU BOIS, New Palz, N. Y.; class of 1894; aged 69; died, September 2, 1934, of chronic myocarditis and aortitis.
- VAN GIESON, WILLIAM H., Bloomfield, N. J.; P. & S., class of 1886; vice-president and for 17 years member of the board of education; aged 69; died, September 7, 1934, of injuries received when he fell over a rock at Boothby Harbor, Me.
- VAN ZILE, DEWITT CLINTON, New York, N. Y.; B. M. C., class of 1905; ship surgeon on the Morro Castle; aged 54; died, September 8, 1934, in the Morro Castle disaster.
- VOIGT, HERMAN ALBERT, Baltimore, Md.; class of 1927; aged 31; died, November 12, 1934, of pneumonia.
- WHEELER, GEORGE BONNIE, Lexington, Ky.; P. & S., class of 1912; aged 50; died, September 12, 1934, following an operation for cirrhosis of the liver with ascites.

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PRAYER AT DEDICATION OF UNIVERSITY HOSPITAL

DECEMBER 15, 1934

By REVEREND DR. ARTHUR B. KINSOLVING

BALTIMORE, MD.

O God, Creator and Father of men, Who dost claim our service through the needs of our neighbors, we thank Thee for the faith that Thy gracious arms enfold our burdened lives. Thou hast put it into the hearts of men to make ever increasing provision for the relief of pain. We give Thee thanks for the progress witnessed in our day in surgery and medicine and nursing.

Today we dedicate to Thee this hospital set down amidst the growing multitudes of this great city. We thank Thee for the visions and inspirations which began this work, and the patient labors which have now brought it to completion. For the generations of men and women who have here dedicated their lives to the alleviation of those ills which our mortal flesh is heir to, we praise Thee. May this symbol of Thy Fatherhood and mercy give hope to many a patient, and bring confidence to thousands of those who are anxious, discouraged and sad. Grant skill to the physicians who shall serve here, and to the nurses who from year to year stand about these sick beds the gift of thoroughness and patient devotion to their calling. Continue, we pray Thee, to turn ever more and more the hearts of the strong and well to the needs of the sick and suffering. Restraining the cords within us which have become less sensitive to the joys and griefs of others, and grant us so to see Thy image in our fellow-men, that in serving them we may minister to Thee, the living Saviour of the world. Through Jesus Christ. Amen.

REMARKS BY PRESIDENT R. A. PEARSON WHEN INTRODUCING GOVERNOR RITCHIE AT THE DEDICATION EXERCISES OF THE NEW UNIVERSITY HOSPITAL

BALTIMORE, MARYLAND, DECEMBER 15, 1934

It would not be possible to mention the names of the many persons who have helped to make the new University Hospital a reality. It is appropriate to mention a very few. The Planning Committee of the Hospital Staff was composed of Superintendent A. J. Lomas, who served as Chairman, Dean J. M. H. Rowland of the School of Medicine, Dr. Arthur M. Shipley, head of the Department of Surgery, and Dr. Maurice C. Pincoffs, head of the Department of Medicine.

This committee worked in close contact with the architects, Messrs. Edmunds and Crisp, and Smith and May. The associates of Dr. Lomas, and the architects pay tribute to him for his exceptional ability, his resourcefulness, his diligence and patience.

The plans were made and the work proceeded under the general direction of a special committee of the Board of Regents. The Chairman of the Board, Mr. George M. Shriver, served as chairman of this committee, and his associates were Samuel M. Shoemaker until the time of his death, John M. Dennis, William P. Cole, Jr., and John E. Raine.

When the appropriation for the building was made, it was with the understanding that it would be supplemented by private gifts. The committee in charge of this important effort was composed of a large number of citizens of Baltimore and of the counties who were not members of the University Staff,—representatives of the Women's Auxiliary Board, and a considerable group of staff members, under the chairmanship of Mr. Shriver.

What made the new Hospital possible, of course, was the action of the Legislature and the Governor in appropriating the sum of \$1,500,000. It would be extremely difficult to express the appreciation of members of the Hospital Staff and the faculty of the School of Medicine on account of this important official action. It would be quite impossible to indicate the appreciation of this action of the Governor and the Legislature that will be felt through years to come by ever increasing thousands of Maryland people who will benefit because of the new equipment.

Governor Ritchie was one of the few who seemed to see the whole picture. He saw the old Hospital with 250 beds, which had served well for many years, often overcrowded and with extra cots in the wards and rooms, and he realized the danger of housing many sick

people in a non-fireproof building. He saw the difficulties experienced by the members of the Hospital Staff, most of them serving without pay and serving well,—so well that the rating of the School of Medicine with the old Hospital was always high. He knew the growing needs of the State in a time when the complexities of living were more trying than ever before. He knew of the great free dispensary service, ministering to hundreds of patients daily, and crowded into a cellar that was not adapted to the purpose.

It is with the greatest pleasure that I announce the first speaker on the program, His Excellency, Governor Albert C. Ritchie.

ADDRESS AT FORMAL DEDICATION EXERCISES OF UNIVERSITY OF MARYLAND HOSPITAL

AT PEABODY INSTITUTE, BALTIMORE, MARYLAND, DECEMBER 15, 1934

By IRVING S. CUTTER, M.D.¹

It is pleasant to contemplate the fruition of a great enterprise. But things that are worth while never just happen. They cost labor, pain and sacrifice. A stalwart, virile structure—dedicated to public service—has arisen in our midst, and we join in hearty congratulations to each and all who have aided in its creation. This new University Hospital did not spring—full-fledged from the head of Jove; it came because of far sighted planning and with the full coöperation of a sympathetic University President and Board of Regents, a wise Governor and a courageous Legislature.

And yet I venture the assertion that the goal, so happily achieved, would be far in the future, were it not for the splendid traditions of the faculty of medicine with a record of service of more than a century and a quarter.

In order that we may acquire a proper perspective, let us glimpse briefly a stone or two in the foundation of medical education in Maryland—laid in 1807.

Few of us, transported to the scenes of those days, could face the discouragements (that appeared on every hand) with enthusiasm or even complacency. Money was hard to get, epidemics of yellow fever were fairly frequent and Maryland physicians imbued with educational ideals were not as numerous as they are today. But Maryland had already taken a forward step in organizing her physicians into a faculty, not for purposes of teaching but for the improvement of the

¹ Dean of Northwestern University Medical School.

profession and the protection of the people. This distinguished group, the Medical-Chirurgical Faculty of Maryland, then as now, encouraged those who were academically minded.

For every emergency, every need affecting human welfare, great men seem to arise, men who are prepared and willing to shoulder burdens and supply leadership, and noble spirits appeared in your midst. Their names loom large on the pages of history—Davidge, Potter, Baker, Gibson, De Butts, Cocke and Pattison, to mention but a few. To Davidge and Potter particularly Maryland owes a debt impossible of liquidation. And no matter how we view the grandiloquent Pattison, he it was who gave a figurative transfusion in 1821 and revived drooping spirits. He was fresh from the laboratory of that great Glasgow anatomist, Allen Burns, and brought with him Burns' magnificent collection of anatomical preparations. We find it difficult, however, to forgive him for collecting from the school the sum of \$8,000.00 for those same specimens, but we must remember that anatomy was the keystone of the educational arch, and the school with the best anatomical museum was perforce the best school.

We may grant that medical training in the State of Maryland in 1807 was a rather poor thing as contrasted with that of the splendidly organized school of medicine of the University of Maryland of 1934—now with its new hospital. And yet, I think we may say in all fairness that individual devotion was fully as great then as it is now. The inauguration of the medical school, its rapid rise in public confidence, the rather broad powers granted to the College of Medicine of Maryland by the legislature led finally to the creation of the University of Maryland. Those early days were days characterized by valiant striving, beginning with the erection of the college building at Lombard and Green Streets in 1812.

Some few years ago chance threw my way an old manuscript ledger of two folio sheets entitled: "The State of Maryland (for the University of Maryland in Baltimore) in account current with the Professors of the Faculty of Physick." The items listed begin with 1812 and end about 1826. Most of them deal with the erection of the college building and its equipment, and with the administration of the several lotteries authorized by the legislature for that purpose. There are a few rather striking items. For example, more than \$7,500 was spent for chemical equipment and apparatus. Nearly \$800 was used for a furnace with which to heat the anatomy room, and the initial library expense for books amounted to almost \$800.

There are numerous mentions of the pending descent of the sheriff and the scramble that ensued to forestall his approach. In 1813 it is

recorded that a loan of \$1,974 was secured from Dr. Samuel Baker, professor of *Materia Medica* (1809–1833) “from his private funds to rescue the University from public auction by the sheriff of Baltimore County, the suit of Price and Watson.” Again in the same year the medical professors passed the hat to the tune of \$700 “to stay the sheriff on B. Berry’s suit.” A little later the plate went around “to stay execution of S. I. Donaldson on Mercier’s note of \$500,” and a loan of \$300 was received from R. Gilmor “on faculty credit to save University from sheriff.”

Trivial and inconsequential as these items may appear to us now, who can doubt but that they represented weeks and months of anxiety and much scratching of professorial heads to find the ways and means.

The chief sources of funds were lotteries. This method of money raising was so popular that it was relied upon for many types of public works and improvements. It eliminated the necessity of direct taxation and hence the legislature was generous in the distribution of the privilege. Apparently, however, lotteries for the benefit of the Faculty of Physic. were not quite so popular or for some reason did not sell so well, as the school for many years was in difficult financial straits. The lottery of 1812 netted slightly over \$29,000; that of 1813 was apparently sold to a commercial concern for \$12,500. Later another class of the same lottery was sold in 1816 for \$7,500. In 1821 a first class lottery for the benefit of the University of Maryland netted a little over \$8,000. When in 1813 the professors of the medical faculty determined “to build a high wall around the college lot” the required amount, namely \$7,000, was not in the treasury and the sum was borrowed from the Bank of Baltimore.

In 1821 the prospects of the school were greatly enhanced when the State of Maryland loaned the Faculty of Physic \$30,000. The State held title to the school property and the faculty obligated itself to pay the interest—\$1,500 per annum. All of this meant the erection and equipment of your beautiful old school building—for it is beautiful—hallowed with undying memories. In the amphitheatre, which let us hope you will never destroy, immortals like Ephraim McDowell and LaFayette received academic honors.

These scattered incidents are cited to emphasize anew that there is an ebb and flow not only in the affairs of men but likewise in the affairs of medicine. Lean periods occur only to give way to a richer and more glamorous era.

Your beautiful new hospital is, in a sense, a direct successor of the first hospital of the University of Maryland built in 1823. It is a free will offering of the State to which has been added certain funds

from the Federal Government and the contributions of public-spirited Baltimore citizens. It is a cap sheaf, as it were, crowning, protecting and fostering your whole structure of medical education and the prevention of disease. The State has extended a generous hand and the Faculty of Medicine and the Regents of the University of Maryland have accepted a definite responsibility. It must forever stand between the people of Maryland and pestilence and untimely death.

The hospital of a State University has four primary functions: (1) the kindly, sympathetic and skilful care of those who are ill; (2) the teaching of medicine at the bedside to the end that well-trained physicians may be prepared to minister to the people; (3) the dissemination of information about health and the prevention of disease, information that the public should acquire and has a right to know; and (4) the advancement of the boundaries of human knowledge.

Upon the sick patient must be focused the finest qualities of heart and mind. If for one moment the staff of your great hospital shall deviate from that objective, that moment will witness the subversion of a noble gift, the prostitution of a sacred enterprise. The quality and high standing of the Medical Faculty of Maryland is sufficient warrant that this untoward eventuality shall never occur. Students learn more by precept and example than by didactic instruction and they will follow with unerring fidelity the ethics of practice of their teachers.

The University Hospital must be regarded as the sunlight that ripens and matures medical training. We can well understand the course of study followed by medical students in the later years of the eighteenth century and the early years of the nineteenth. They listened to the lectures of the Edinburgh professors, took notes, and then received their degrees. Medical education in Edinburgh had been systematized with a fixed curriculum and scores of young Americans found there a relatively easy pathway to a degree. But when it was all over they knew pitifully little about medicine or surgery or midwifery. And so, all of them, or the best of them, journeyed to London where they walked the wards of the London hospitals. There, they received clinical training from master clinicians at the bedside. They learned for the first time the how of an amputation, of the ligation of a blood vessel, but more important than all, they learned *clinical observation*. Medicine cannot be taught from books or by means of lectures or museum specimens. The type of medicine that trains for the care of the sick must be learned through intimate contact with those who are ill. With reasonable supervision, the student must have the opportunity to examine the patient, correlate the laboratory sci-

ences and thus acquire that essential trait, the ability to think clearly, logically and intelligently on a clinical problem.

But you say, what of research? what of investigation? If you would avoid sterility, investigation, teaching and the care of the sick must go hand in hand. Not only will students be stimulated in an atmosphere of investigation, but the people of the state will be the ultimate beneficiaries. Medicine is not a cast iron science. There are no two cases of pneumonia exactly alike, as there are no two people who match each other in structure or resistance. Even identical twins present differences. We cannot be blind to the medical progress of the last generation, and we must view that progress as an indication of the existence of an untrodden disease wilderness waiting to be explored.

Your new hospital is unexcelled in point of construction, equipment, staff and personnel, but it will become a mere mass of building material if every ward, every laboratory and every room does not reflect, in faculty and in students alike, a spirit of enthusiasm and interest in the search for new truths. The younger men of the staff and of the teaching group, filled with energy and ambition, will plow the fields of ignorance and will acquire new knowledge. They will be guided away from mistakes and pitfalls by the sound logic, the judgment and the wisdom of your professorial group. Together they will make great contributions.

The medical faculty of the University of Maryland has led in many fields; medical journalism, medical libraries, independent chairs for the teaching of diseases of women and children and for instruction in eye and ear diseases. When the demand became insistent for higher standards in pre-medical education and in medical training the University of Maryland assumed a leading rôle.

The people of Maryland have had wise leaders. In no single respect has greater wisdom been shown than in the erection of your University Hospital in the largest city of the state. By its very location, you have been saved a plunge into lavish expenditure that has hung a veritable financial millstone around the educational necks of some of your sister states. While there may be some advantage in the rubbing of academic elbows with your colleagues on the faculties at College Park, you have the obvious advantage of a generous amount of clinical material available for teaching, of a distinguished faculty, which, if transported and set up with equal power in one of your smaller communities, would require from the State of Maryland an additional expenditure of several hundred thousand dollars per year.

Hospitals are somewhat like people. At times they are temperamental, jittery, seemingly unkind. But like people they possess souls.

An unselfish singleness of purpose cannot but weld an institution into something that possesses both human and humane attributes.

Henry Van Dyke relates in his "By the Waters of Babylon" the story of Arteban who came across a dying stranger on the edge of the desert. He recognized in the "pallid skin yellow as parchment" the fever that came out of the swamps in the autumn (malaria). Sensing that the sick man was beyond human aid, he turned to leave. Suddenly "the brown, bony fingers closed convulsively on the hem of his coat." Arteban reasoned that his errand—"the search of one who is to be born king of the Jews"—did not permit him to stay; he also knew that if he did not stay the man would surely die. In spite of the urgency of his mission, humanity won, and Arteban, a Magus and a physician, ministered to the wants of the poor, sick Hebrew. "Hour after hour he labored as only a skilful healer of disease can do, and, at last, the man's strength returned. . . ."

It is the old story of the good Samaritan and is repeated a million times a day by physicians, nurses and all those who care for the sick in this heedless, tumultuous world of ours. Tens of thousands of trained, self-sacrificing ministers to the sick, give each day, a large part of their time and effort, to public welfare and to the advancement of science, seeking the conquest of disease—all without thought of personal recompense. One is tempted to indulge in superlatives in contemplating the potential value of this University Hospital to the people of Maryland and to society at large. It will help to train not *good* physicians, but *better* physicians. In the course of time it will directly or indirectly touch the lives of every family in this great state.

Medicine is an all embracing science. It draws heavily upon physics, chemistry, biology, mathematics, psychology, sociology, law and even divinity. And so every department of your university will integrate into your medical faculty, and into the activities of this hospital.

Medicine has not yet been mastered by the rules of trade, and if human welfare is to be served, it must never become so. Idealism must be held boldly in the foreground, as medical service is an individual service. It can neither be purchased in a shop nor delivered in a package. With this one exception (and in no sense would I belittle business), this hospital and this school will somewhere along the line serve as a benefactor to all of us. This is guaranteed by the traditions of your school and of the university, by the high standard of personal and professional attainments of the faculty and by the vision of those who, by their dreams and industry, have brought this beneficent project to so successful an issue. The medical faculty of the University of Maryland has held aloft the ideals of the founders of the

school and has added new laurels with the passing years. The people of the State of Maryland have contributed generously. But they and succeeding generations owe a great debt to those persons who with far-sighted vision projected this enterprise and helped in its birth. Of this hospital may it be said forever in the words of Oliver Wendell Holmes:

“Here stand the champions to defend
From every wound that flesh can feel;
Here science, patience, skill, shall blend
To save, to calm, to help, to heal.

“Not ours to ask in freezing tones
His race, his calling, or his creed;
Each heart the tie of kinship owns,
When those are human veins that bleed.”

REMARKS AT THE DEDICATION EXERCISES OF THE NEW UNIVERSITY HOSPITAL

DECEMBER 15, 1934

By ALAN M. CHESNEY, M.D.¹

BALTIMORE, MD.

President Pearson, Members of the Board of Regents, Distinguished Guests, Ladies and Gentlemen: My associates of the Johns Hopkins University, whom I have the honor of representing on this occasion, deeply appreciate the privilege of sharing in the dedication of the new University Hospital. From them I bring to their colleagues of the Medical Faculty of the University of Maryland a cordial message of hearty congratulations, best wishes and deep affection.

We of the Johns Hopkins have a particular interest in these exercises because they relate to a field which we also cultivate—the field of medical education. We feel that an unusual significance attaches to the dedication of this particular hospital, and it is proper that I should acquaint you with our interpretation of this important event.

To do so it is necessary for me to remind this audience that it has assembled here, not to dedicate just another hospital to care for the sick of this community, but to dedicate a hospital which is a part of a medical school, one which is primarily devoted to the high purpose of medical education, what we call, in short, a teaching hospital. The

¹ Dean, Johns Hopkins University School of Medicine.

compelling reason for building this hospital was that it was needed for the important business of training doctors. That is why it was built by the State out of public funds and that is why these exercises take on for us an unusual significance.

In my opinion there are two important deductions which can be made from the fact that the State of Maryland has built a new teaching hospital of its own. The first of these deductions is that the State of Maryland is in the business of medical education to stay. I, for one, hold that the State of Maryland was fully justified in entering the field of medical education and in doing so exhibited a commendable degree of enlightened self-interest. The other deduction, which I would regard as a corollary of the first, is that having undertaken the business of training doctors, the State of Maryland must carry on that business to the best of its abilities, and must discharge its duties in that direction in a manner that befits its high position. There can be no question but that it is the plain duty of this State to support its own Medical School in a decent fashion. To my mind any other attitude is unthinkable.

Now when I say that it is the business of the State of Maryland to support its own Medical School in a proper manner, I do not mean by that word "State" merely our governmental machinery, that is to say the executive officers, or the legislative representatives; I mean by the words "State of Maryland" the ordinary citizens of Maryland, persons such as you and me. For, ladies and gentlemen, in the final analysis, no matter what the executive officers or the legislative representatives may think or say, *we citizens* are the State of Maryland, and this is one of our undertakings. We have entered the field of medical education for a good and sufficient reason—because we want good doctors; we have built this hospital with our money because we need it to help train good doctors, and we must now see that it receives from us, within the measure of our means, all legitimate support, in order that it may fully serve the purpose for which *we* have caused it to be built. I would emphasize the fact that this new hospital is *not* the property of the staff to which it is entrusted, nor is it the property of any State official, high or low; it is *our* property, and what it becomes will depend to no small extent upon the support we citizens of Maryland give it.

I would also emphasize the fact that the completion of this new hospital does not by any means fulfill the needs of the Medical School of the University of Maryland. That school also requires other facilities—among them a psychiatric hospital of its own, and we Marylanders must find the funds with which to build such a hospital.

It has been thought by some in the past that there is no real need for two medical schools in Baltimore, that one would be sufficient for the task of training doctors for this community's needs. I am not one of those who holds that opinion, and I think there are few who hold it now. There was a time, some twenty-five or thirty years ago, when there were too many medical schools in Baltimore, but that is not the case today. In my judgment there is abundant need and abundant room for both schools. It is not necessary for me to say that they can and do live and work harmoniously side by side. That fact is known to everybody. Engaged in a common enterprise, they are accustomed to take counsel together, and what touches one, whether for good or ill, touches the other. It is for that reason that my colleagues of the Johns Hopkins University rejoice in the completion of this splendid new hospital of the University of Maryland, and do give it hail.

Dedicating a building is in many respects like christening a new baby. In both instances we have a ceremony to which we invite interested friends, we invoke the benefit of clergy, we inspect the new arrival, we compare it (privately of course) with its predecessors, we congratulate the parents, and perhaps drink a toast to its health and future prosperity. There is one difference between the two ceremonies, however. In christenings provision is made for the appointment of either a god-mother or a god-father, or both. No such provision is made in the dedication of a building, but it seems to me high time to correct this defect. If the University of Maryland desires to have a god-mother for its latest offspring, I claim that office for the Johns Hopkins University.

PSYCHIATRIC DIAGNOSIS IN GENERAL PRACTICE¹

By J. H. CONN, M.D.

BALTIMORE, MD.

If the physician could have dismissed everyone of his "neurotic" patients and centered all of his interests on "real" medical problems, theoretically, all would have been well. Two practical issues, however, made this an impossibility. First, the physician discovered, much to his regret, that these patients constituted a great part of his daily practice, and that, therefore, he could not get along without them. And secondly, they persisted in presenting themselves with every type of body-complaint, so that only a careful study could separate the "really" sick from those patients whom he thought suffered from "imaginary" illnesses.

As in the case with all "nuisances," the physician had an urge to call them names and went to two sources in order to obtain them. He utilized the Greek theories of medicine to coin the terms, melancholia (black-bile), hysteria (a wandering of the uterus), and psychosis (a disorder of the psyche or soul).

Modern scientific medicine has given up these antiquated theories of pathology long ago, but the physician has hung on to the worn-out terms in order to have some sort of a name for these medical enigmata. Thus, what was considered to be poor medicine was considered to be good psychiatry.

The second source of name-coining was the physiological studies of the nineteenth century. The neuron theory was soon utilized by physicians in order that they might speak in terms of a "neurosis" (a disease of the neuron). This condition had been established as a contrast to that which had been described as a "psychosis" (a disease of the psyche). In order to take care of intermediate disturbances it was necessary to complicate matters further by introducing the term "psychoneurosis" (a disorder of both neuron and psyche).

It is of importance to recall that the text-books of medicine and psychiatry in the 1890's had included epilepsy and chorea as "neuroses." Insanity was described as "a chorea or convulsive disease of the mind, the derangement being in nerve centers whose functions are not motor but mental, and whose derangements therefore display themselves in convulsions not of the muscles but of the mind" (Maudsley) (1).

¹ Henry Phipps Psychiatric Clinic, Out-Patient Department, Johns Hopkins Hospital.

All this was a very serious but an obviously futile attempt to establish a disease entity out of the facts contributed by certain types of behavior. The word, "nervousness" (originally meaning a tissue irritability), and the term, "neurasthenia" (an irritable weakness) belong to the same category of pseudo-physiological explanations.

These attempts at a physiological formulation of certain types of human behavior occurred at a time when the physician had been threatened with the loss of all these patients. For had not Kant maintained that they belonged to the realm of philosophy, and had not the German clergy claimed these patients as their own in the last part of the nineteenth century?

At least fifty years have elapsed since the physician has taken over these patients. During this period of observation, he has carefully studied the structure and physiology of their central nervous systems. The results are anything but enlightening when they are applied in general practice.

But what should the physician do? Shall he wait until the day on which the "real cause of it all" will be discovered? Or should he begin to help the patient as best he can with the facts that are already in his possession?

The physician can do very little for the patient with the facts of heredity. He can do even less about hypothetical toxins and brain lesions, but he can do much more for his patient if he asks, *who [what kind of a person] is making these complaints? Under what conditions did the trouble start, and how much of it can be modified today?*

Many physicians refuse to face these personal problems. They begin by assuming some inherent weakness and exhaustion of the central nervous system and therefore resort to isolation, bed rest, and hyperalimentation. The patient is then returned to his home and work so that he may begin his difficulties all over again with as little understanding of his condition as when he first came into the office.

The following series of cases illustrate certain common disorders of human functioning which may come to the attention of any practising physician:

The first patient is a man of 25, who had been promoted to the position of foreman in a department store printing plant after ten years of service. He had developed a "pinching pain" in the right lower quadrant which was diagnosed "chronic appendicitis" by two outside physicians. He came to the surgical dispensary, where the same diagnosis was made. After two weeks of observation, the variation in his complaints and the lack of objective findings caused the surgical interne to change the diagnosis to "nerves," and he was referred to the psychiatric dispensary.

The patient is a serious, worrisome, oldest son, who is supporting his father and a younger sister. His mother died at forty-four of cancer of the uterus. His job has

become more difficult for him every year and during the month which preceded his abdominal discomfort he was working harder because of the illness of one of his workmen. This necessitated spending more time on a hand-operated paper cutting machine. For the past few years the patient had been uncomfortable when he had to work this machine. An "experienced" printer had told him that this type of work (reaching up for the lever of the cutting machine) would lead to "stomach trouble" and the patient feared that this in turn would become a cancer.

The complaint of the patient gave the first clue to what he was really worried about. He said, "I have pains in my stomach, *when I have a pain I worry.*" About what? "Something real serious—whether I have cancer, and I blame it on the paper-cutter."

What is the diagnosis in this case? Is it a case of "nerves?" If so, what nerves are involved? Why cover up our ignorance by the term, "hypochondriasis" (which means under the ribs)? Why not say it is a case of a worrisome, serious young man who is the sole support of his family and who develops abdominal pains which he thinks are the beginning of a cancer (as his mother died of cancer). He is carrying a work-load above his capacity and is worried about working on a hand paper cutter. These are the actual facts and when they are in our possession we can write to the department store recommending that his work be made easier and that the company take up the possibility of getting someone else to help with the hand paper-cutter. All this was done in a letter to the company. The patient was reassured when *he* had discussed his fears with the physician; and what could be done with the available facts had been done.

The next patient is a white male, married, age 23, who said his trouble was: "Just nerves, a constant twitching of my neck and bad dreams like somebody is after me and I can't get away."

About one and a half years ago, he noticed that the muscles of his neck (platysma) began to twitch and that he was restless, slept poorly, and didn't feel like eating. He was an electrician and getting along fairly well until he was "laid off." A few months later the twitching began. He had been married four years and had two children (22 months and 3 months of age). He had been a welfare client for the past year. The patient was a bedwetter in childhood, always serious, worrisome, and had moody spells under strain. During this period of increased financial worry, he began to "twitch."

It was arranged that he go to a relative's farm *to work* for two weeks with no decrease in the allowance which the welfare agencies had allotted to his family. He spent the next two weeks doing farm chores and chopping wood and returned home feeling "fine." A few days later he began to "twitch" again. Sedatives and a formulation of his reaction to increased strain were employed with a moderate degree of relief.

We can call this a "motor neurosis," but we learn more when we say this is "a father of two small children who has always been moody and upset under strain. He has been out of work for one and a half years and under severe financial difficulties develops a twitching of the platysma. He needs a job that will give him a sense of financial security."

The following complaint was given by a widow 38 years of age: "I am real nervous. I have indigestion, I can't sleep. My feet and legs get cold. I can't pray like I used to. Is my soul lost?" Three years ago a hysterectomy was performed because of fibroid tumors. She was kept ignorant of the real nature of the operation

and only learned about it from the nurse. It was a "terrific shock" to learn that "everything had been taken out." "Now," she said, "I can never marry again—what have I to offer?" She had been living in hopes that she might marry again some day. She began to brood over her condition and slept poorly. During the Christmas holidays, she went to church and found it difficult to pray ("I felt like the Lord didn't hear my prayers"). She felt tearful and cried and had thought of suicide.

The patient has always been a timid, easily startled person. She received only two years of schooling and spent the greater part of her life working in a cotton mill. One sister had been hospitalized for "melancholia."

What diagnosis can be established in this case? Does her disorder belong to the clergyman or to the physician? Does the term "melancholia" do justice to *all* these facts? Why not say, this is a timid woman who had a hysterectomy performed without proper preoperative discussion and had been tearful and thought of suicide because she believed that she had lost her chance of getting married again and could get little consolation out of prayer. Hospital care was advised because this patient was considered to be a suicidal risk but the family refused. The *responsible* member of the family was given all the facts. A program of light household duties and sedative therapy was begun with weekly interviews. The patient gradually recovered from her tearfulness and was more her usual self in several weeks.

The last case illustrates one of the commonest of psychiatric disorders and one which is most frequently misunderstood. The patient was a 36 year old married architect who was seen in January, 1934, when he complained of "belching—I seem to get dizzy, like I am going to fall, but I know I am not. I am relieved when I belch. *Maybe I cause the gas myself by swallowing.* If someone mentions death, I get a strange fear. When I see an accident, I feel nauseated and get those dizzy feelings. I have spells like I am going to pass right out."

The present illness began two years ago when the patient began to experience sinking spells and then sudden attacks of choking feelings, shortness of breath, a pounding in the head and chest and felt just like he was going to "pass right out." The first physician said that it might be lead poisoning as he had been doing some office painting. A "stomach" doctor put him on belladonna therapy, but the patient said this only upset his stomach more and increased the belching.

During the last few weeks he had had terrifying dreams of the death of friends and relatives, and had a constant fear that he would scream loudly or suddenly go blind during the dizzy spells. His appetite was good. He had only lost five pounds during the last two years.

The patient was a stickler for detail and had always been a serious plugger. He was easily scared and had the habit for years of looking under his bed for a burglar. He had an excellent work record as an architect and was getting along well until the crash of 1929. His business losses necessitated that he take in two 'money' partners and continued losses forced him out of the business entirely (one year ago).

He bought a new home (\$12,000) in 1929 and it was foreclosed in August, 1933. His wife became a nagger because of the financial strain, and the family history revealed the same type of overscrupulous attention to detail and worrisomeness in his brothers, both of whom had stomach trouble (belching).

One physician had made a tentative diagnosis of hyperinsulinism (the blood glucose was found to be normal), and another had termed it "a psychoneurosis with pyloro-spasm." The diagnostic summary of the *available facts in this case* would be

that we are dealing with an overconscientious readily frightened man who has a life-long habit of looking under the bed for robbers. Attacks of belching, palpitation and choking have developed in a setting of severe financial strain. The patient was encouraged to *keep on the job* and he did. Sedative therapy and a formulation of his illness in terms of his life situation and simple gastro-intestinal physiology was utilized with good success.

The physician who has been trained to avoid traditional labels and to *face the facts as they are presented by the patient* can begin to do something for his patient (2). He can avoid such pseudo-professional slang as "this patient is crazy, nervous—or both," and begin to study the *type of complainer* as well as the complaints in the setting in which they occur. In this manner he can get into closer contact with his patient and develop a healthy, helpful outlook on the functional disorders which make up the greater part of his practice.

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ANEURISM OF THE TEMPORAL ARTERY. III¹

BY NATHAN WINSLOW, M.D., AND MONTE EDWARDS, M.R.C.S. (Eng.)

BALTIMORE, MD.

We have taken this opportunity to interpolate seven cases of temporal aneurism the existence of which was unknown to us when this article was submitted for publication. Transcripts concerning four of these cases were prepared from private memoranda kindly placed at our disposal by Dr. Rudolph Matas of New Orleans. The rest were culled from the literature. No use of them has been made in the main discussion. If incorporated, they would not have materially changed any of the computed figures or deductions. Six of these patients were cured and in one the result was not recorded. Three were of the arterio-venous type, and four of the arterial variety. Of the former, one was caused by a cut, one by a contusion and one by a gunshot wound. Of the latter, two were produced by contusions, one by a laceration and one by the cupping-scarificator. Added to the observations listed in the tables, they raise our series of aneurism of the temporal artery to 115 cases.

H. H. A. Beach (Aneurismal Varix, Ligation of Common Carotid Artery, Recovery, Boston Med. and Surg. Jour., 77: 361-364, 1867-1868; also in Callander, C. L., Study of Arterio-Venous Fistula, etc., Johns Hopkins Hospital Reports, Baltimore, 19: 259-358 [case 78, table 5, p. 303], 1920) reports the case of a female, aged 23, who entered the hospital, May 1, 1867. When five years of age, she fell and struck her head upon a sharp knife which produced an incised wound above the zygomatic process and over the temporal artery. Soon after the wound healed, a pea-sized, pulsating tumor, appeared. It was unaccompanied by pain. After March, 1867, its growth was rapid. The tumor was elevated above the skin, possessed a thrill, pulsated and to the ear presented a continuous roar. Compression of the carotids, or at the punctured point, caused a diminution in the size of the swelling, along with dizziness and a sensation of distress. Under ether anesthesia, a temporary ligature was placed beneath the common carotid to control the circulation. An incision was then made over the tumor and two needles were passed under the pulsating mass and compression was applied by a ligature wound around the pins. As this procedure failed to arrest entirely the circulation, the ligature which had been placed around the carotid artery was tied. Still the tumor pulsated a little at its upper part. Numerous and copious hemorrhages from the wound in the temple necessitated a second interference. This was performed by Bigelow who removed the strangulated tissue. October 28, 1867, the patient was in good health. There was no deformity nor pulsation.

¹ From the Surgical Department of the University of Maryland, School of Medicine.

For first and second instalments see BULLETIN OF THE SCHOOL OF MEDICINE, University of Maryland, 19: 57, 1934; 119, 1935.

A. Duval (*Anévrysme de l'artère temporale, compression concentrique*, Arch. de méd. Navale, Paris, 1: 122, 265, 397-417 [(obs. 21, p. 402)], 1864) relates the following case. Six months after a contusion, a tumor, the size of a small nut, appeared in the temple. It was painless but prevented sleep by the pulsations with which it was animated. The roar of the beats was heard over the entire head. The man consulted many physicians who employed, without success, divers measures of compression. The patient consulted Duval in August, 1850. The swelling was expansile and harbored a bruit. The aneurism was situated 5 cm. above the left zygomatic arch. Duval made a cup of sheet-tin with a brim sufficiently broad to rest upon the neighboring parts; filled its bowl with cotton, and fastened the apparatus over the swelling. Owing to the pain it caused, the mechanism could not be continuously borne, and on occasion, owing to inflammation of the skin, he had to suspend compression for seven or eight days. By the twenty-fifth day, expansile movement and souffle had disappeared. The longest sitting was twenty hours. The treatment lasted three months. In March, 1852, examination revealed that the cure had maintained itself.

R. Liston (*On Injuries and Diseases of the Blood-Vessels, Practical Surgery*, Philadelphia, Thomas, Cowperthwait and Company, 1842, 2nd American edition from the 3rd London edition, with additions by G. W. Norris, chapter 6, p. 202, line 13 from bottom) says, it is not long since I assisted my colleague, S. Cooper in operating on a case of aneurism of the anterior branch of the temporal consequent upon the application of the cupping-scarificator.

R. Matas (Personal communication) has had under his supervision the four cases that follow:

Case 1 was that of a colored man, laborer, aged 23 years. This man was admitted into the Charity Hospital, New Orleans, on November 29, 1910, to Gessner's service for an arterio-venous aneurism of the left temporal vessels. On December 31, 1909, the patient had a fight and was struck in the temple. The next morning, he noticed just above and in front of the left ear a tumefaction. The swelling was the size of a billiard ball and painless. As it had not subsided at the end of a month, the patient visited a physician who incised the mass. A free hemorrhage resulted. The wound was sutured and a pressure bandage was applied. After the bandages were left off, the patient heard a sound in his ear which he likened to a sighing wind. The noise was heard best when the patient lay down with his head resting on the affected side. The swelling which had shrunk to the size of an English walnut now remained stationary but the patient continued to hear the peculiar noise. As the mass gave no pain, he paid no attention to it until several days before admission when he was struck in the same place by a piece of machinery-belt. The accident caused the tumor to enlarge to twice its former size and to become painful. The patient again consulted a physician who incised the mass and evacuated some clotted blood but no pus.

On November 29, 1910, with the man under ether anesthesia, Matas ligated temporarily the external carotid artery. He then exposed the tumor. The sac was opened and the venous cavern which bled profusely was obliterated with catgut. No attempt was made at arteriorrhaphy. The patient made an uneventful recovery and was discharged on December 14, 1910, as cured.

Case 2 was that of a colored man, laborer, age 30 years, who was admitted into the Charity Hospital, November 6, 1921, to Gessner's service. Twenty days before

admission a car ran into his automobile and threw him out. He was cut about the head and face and was knocked unconscious. He was treated at home, but one of the lacerations in his head failed to heal and the wound swelled. The swelling became larger by degrees and continually oozed blood. On the fourth day after the accident the wound reopened. He was then sent to the hospital.

On admission, the patient was in no pain, but was bothered by a seepage of blood from one of the wounds. Examination revealed a pulsating tumor situated in the forepart of the left temporal fossa near the external orbital process. It was the size of a marble, and blood was seen oozing from the lesion. On palpation, the swelling was found to be animated by expansile pulsation.

On November 11th, while the patient was being prepared for operation, a sudden stream of blood gushed from the aneurismal sac. The hemorrhage was temporarily arrested by pressure. After several futile attempts to grasp the bleeding point, two catgut sutures were passed through the skin and subcutaneous tissue one-half inch from either end of the sac. The ligatures, when tied, stopped the bleeding.

November 12, 1929, under local anesthesia, C. O. Cassegrain ligated the temporal artery proximally, excised the sac and again ligated the artery beyond the sac. The patient was discharged as cured on November 22, 1929.

Case 3 was that of a white man, 25 years of age, who was admitted into the Touro Infirmary, New Orleans, on February 1, 1934, with a traumatic arterio-venous aneurism of the left superficial temporal artery and vein, and a humming noise in the corresponding ear. In December, 1932, the patient, while hunting, was accidentally shot just above and in front of the left ear. A short time later, he noticed a swelling at the site of the wound and a buzzing in the left ear. As time passed, the lesion enlarged and the murmur grew louder. The veins on this side of the head dilated also.

Examination revealed a small raised swelling just anterior and superior to the left ear. The mass was 3 cm. in width and raised 1.5 cm. above the surface of the scalp. Palpation disclosed it to be a soft mass with a thrill which lasted throughout systole and diastole, but having a systolic accentuation. On auscultation, a continuous murmur was heard. This was louder in systole. The neighboring veins were large and dilated. The heart and lungs were clinically negative.

On February 10, 1934, with the patient under novocaine anesthesia, L. H. Landry ligated the external carotid artery above its superior thyroid branch. The anesthetic was then changed to ethylene for the rest of the operation which comprised removal en masse of the veins and artery and ligation of the artery at both ends of the sac. The buckshot was not found. The patient was discharged, as cured, on February 19, 1934.

Case 4 was that of a white male, school-boy, single, 17 years of age, who was admitted into the Charity Hospital, April 3, 1934. Three weeks before, the patient had a fight and was struck in the left temple by his opponent's fist. The blow produced a swelling, the size of a walnut, which later shrank to the size of a marble and had remained that size ever since. At times the condition pained him very much.

One-half an inch in front of the left ear and lying in the course of the temporal artery, was a small pulsating mass, the size of a marble. The tumor was reducible on compression and was movable.

On April 10, 1934, with the patient under ether anesthesia, F. Chetta exposed the aneurism, ligated the sac on each side of the pole and excised the sac. On opening

the sac, a small laminated coagulum was seen. The patient was discharged, April 11, 1934, as cured.

The following may or may not be examples of aneurism of the temporal artery. They are at least to our minds of doubtful character and smack of the class known as circoid aneurism with which this paper is not concerned. It is only fair to state that Callander has included them in his article as examples of arterio-venous aneurism of the temporal vessels.

G. Bushe (A Case Where after the Excision of an Anastomosing Aneurism from the Right Temple, Ligature of the External Carotid Became Necessary to Restrain Hemorrhage, *Lancet*, London, 2: 413, 1827-1828; also in Callander, C. L., *Johns Hopkins Hosp. Rpts.*, 19: 259-358 [case 71, table 5, p. 303], 1920) relates the case of a girl, age 2½ years, who in April, 1827, was brought to Bushe in consequence of a purple, pulsating tumor about the size of a pigeon's egg, situated in the right temple, which had existed and had gradually enlarged from her birth, being for the last three months attended with repeated attacks of bleeding. On May 28th, alarming bleeding having occurred, operation was proposed and accepted. On examining the temple, he found that the tumor had enlarged considerably, and was ulcerated. Bushe, therefore, removed the aneurism, which laid above the temporal fascia. On the following morning the bleeding again returned and was so alarming that he secured the external carotid artery. From this point there was no bad symptom.

W. Fraser (A Case of Aneurysm by Anastomosis of the Scalp, etc., *Brit.-Amer. Jour. of Med. and Phys. Sc.*, Montreal, 1: 283, 1845-1846; also in Callander, C. L., *Johns Hopkins Hosp. Repts.*, Baltimore, 19: 259-358 [case 74, table 5, p. 303], 1920; also *Annals Surg.*, Phila., 71: 428-459 [see table p. 442], 1920) reports that on June 19, 1845, a man, age 20 years, consulted him on account of a tumor, the size of half an orange, situated over the parietal bone. Twelve years previously, the patient fell and struck that part of the head occupied by the tumor. The spot commenced throbbing and had gradually enlarged. The year preceding the above date, the lump had increased more than during any former one and so troublesome had the whizzing pulsation become that it on occasion prevented him from sleeping.

To the eye, pulsation in the tumor was very apparent. To the ear the aneurismal bruit was distinctly perceptible. To the feel, it was soft, communicated a peculiar thrill to the finger, and could be nearly emptied by pressure. On removing the compression, it refilled almost immediately. The occipital and temporal arteries of the same side were greatly enlarged. The condition was cured by the insertion of hare-lip needles beneath the several vessels supplying the tumor and by twisting ligatures around the points of the pins.

W. Reil (*De Varice Aneurysmatico*, Inaug.-Diss., Halis, 1845; also in Callander, C. L., *A Study of Arterio-Venous Fistula*, etc., *Johns Hopkins Hosp. Repts.*, Balto., 19: 259-358 [case 75 in table 5, p. 303], 1920; also in Bramann, F., *Das arteriell-venose Aneurysma*, *Arch. f. klin. Chir.*, Berlin, 33: 1-107 [case 4, p. 4], 1886) cites the case of a man, age 30 years, whose right temporal artery and all of its branches were dilated. A tumor half the size of a hazelnut possessed a strong thrill. The patient received no treatment. Nine months later there was no change in the condition. The lesion was of spontaneous origin. The diagnosis was arterio-venous aneurism of the temporal vessels.

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- Bell, J.: *The Principles of Surgery*, Edinb., 1801, vol. i, Discourse 11, pp. 460-471, article—Of the Aneur. from Anastomosis (Article deals only with cirroid aneurism).
- Bergmann, E. v.: *Die Lehre von den Koppverletzungen*, Stuttgart, 1880, p. 32 (says he has treated two arterio-venous aneurisms of the temporal vessels caused by cupping): also in Bramann, F., *Das arteriell-venöse aneur.*, *Arch. f. klin. Chir.*, Berlin, 33: 1-107 (see footnote p. 6), 1886. (Not included for lack of data.)
- Bérard, A., Denonvilliers, C., et Gosselin, L.: *Mal des artères—anévrismes*, *Compendium de chir. prat.*, Paris, 1851, T. ii, pp. 91-145 (Contains no new cases of temp. aneur.).
- Bérard: *Dict. de méd., ou Répertoire gén. des Sc. méd.*, par Adelon, Béclard, Bérard, etc., Paris, 1832-1845, T. iii, 2 ed., p. 49, article—Anévrismes.
- Bier, A.: *Ueber Kriegsaneurysmen*, *Deut. med. Wochschr.*, 41: 121 and 157, p. 123, paragraph 4, 1915, (Says that he has operated on 4 cases of temp. aneur., 1 of which was arterio-venous. All were cured. The article is a critical analysis of 44 traumatic aneur. that Bier had operated on in less than 2 months. None was less than 8 days' duration nor over 3 months existence).
- Boyer, A.: *Traité de mal. Chir.*, etc., Paris, 1814, T. ii, 1 ed., p. 183, (Says rarely observed, advises compression, no personal obs.).
- Breschet: *Mém. sur différentes espèces d'anév.*, Paris, 1834.
- Broca, P.: *Des anév. et de leur traitement*, Paris, 1856, p. 881, (In foot-note mentions Frestel's case).
- Broca, P.: *Varices artérielles du cuir chevelu guéris par une seule application de perchloride de fer*, etc., *Des anév. et de leur traitement*, Paris, 1856, p. 231, obs. 3; also *Bull. Soc. de Chir.*, Paris, 6: 148, 1855, (Cirroid aneurism).

- Brodie, B. C.: Aneur. by Anastomosis in the Forehead, Successfully Treated by the Application of Ligatures, *Lancet*, London, 1: 569, 1828-1829; also *Lancet*, London, 2: 559, 1828-1829; also *Med.-Chir. Trans.*, Lond., 15: 175-185, 1829. (Classed by Crisp in his treatise on Blood Vessels, London, 1847, p. 275, as circoid. It could, however, be arterio-venous. Until that time, according to Brodie, only 3 cases of this description were on record).
- Bruns, v.: *Handb. d. prakt. Chir.*, Tübingen, 1854, Abt. 1, S. 149-185, section—Gehirn und Umhüllungen, (General discussion, number of examples of arterial and arterio-venous aneur., but no personal obs.).
- Cavallini: *Collezione istor.*, vol. iii (Santi in his article, *Tumeurs anév. d. l. region temporale*, *Arch. gén. de méd.*, Paris, 2: pp. 543 and 679, 1884, and the same journal, 1: 172, 1885, says that Cavallini has observed a case of temporal aneur. and gives the above reference, but this is apparently an error).
- Chassaignac, E.: *Les tumeurs de la voute du crâne*, Thèse de Concours, Paris, 1848 (No personal observation, but on page 102, he mentions among others Mérat's case).
- Cloquet in Magistel, A. J. L.: *Traité prat. des émissions sanguines*, Paris, Baillière, 1838, p. 64 (Says Cloquet observed 2 aneurisms in a patient upon whom Bécлар had opened the temporal at 2 places. Case dropped because we could not find any other mention of it).
- Cloquet, J. et Orfila: *Gaz. méd. de Paris*, année xxii, 3.s., 6: 170, 1851, (Circoid aneurism which disappeared spontaneously).
- Crisp, E.: *A Treatise on the Structure, Diseases and Injuries of the Blood Vessels*, London, John Churchill, 1847, pp. 113 and 267, case 509 (Of 551 cases published in Great Britain from 1765 to 1847, he could find only a single aneurism of the temporal artery—the case of Benson's).
- Delpéch, J.: *Observations et Reflexions sur la lig. des principales artères*, *Clin. Chir. de Montpellier*, Paris, 1823, T. i, p. 1 (No case of temporal aneurism).
- Drennan, L. M. and Llinas, J.: *Traum. Aneur. of Scalp*, Report Medical Department, United Fruit Company, 17: 221-223, 1928; also *Traum. Aneur. der Kopfhaut*, *Zentralorg. f. d. ges. Chir.*, Berlin, 47: 687, 1929, (Aneurism on back of head. Probably from a branch of the middle or of the posterior meningeal artery).
- Dupuytren, G.: *Obs. sur lig. artère carotis prim. dans case de l'anév. des artères de l'oreille, de la tempe, etc.*, *Repertoire gén. d'anat., et de physiol.*, 6: 231-241, 1828, (Case of circoid aneurism—Robert's case, ligated 1st right common carotid artery and in 1857, Robert lig. 2nd left common carotid artery).
- Dupuytren, G.: *Tumeur érectile de la tête pénétrant dans le crâne, etc.*, *Leçons orales de clin. chir.*, Paris, Germer-Baillière, 1839, iii, 2. ed., 213.
- Ehrmann, J.: *Des effets produits sur l'encéphale par oblit. des vaisseaux artérielles, etc.*, Paris, Baillière, 1860 (No personal case of temporal aneurism).
- Erichsen, J. E.: *Observations on Aneur.*, selected from the works of the principle writers on the disease from the earliest period to the close of the last century, London, 1844, p. 159 (No article by him, but contains reprint of Monro's *Essays and Observations Physical and Literary*, Edinb., 1771, in which Bartholin and Monro's cases are cited).
- Fischer, G.: *Die Digitalcompression u. Flexion bei Aneur.*, *Vierteljahrschrift f. d. prakt. Heilk.*, Prag., Jahrgang xxvi, 3: g. F., 103: 167-206, pp. 202 and 203, obs. 172 and 173, 1869; also *Die Digitalcompression, etc.*, *Vierteljahrschrift f. d. prakt. Heilk.*, Prag., Jahrgang xxvi, 4: g. F., 104: 149-175, 1869; also *La com-*

- pression digitale et la flexion appliquées au traitement des anév., Arch. gén. de méd., Paris, trad. par Regnier, L., 6.s., 28: 23, 307, 429, 579 and 701, 1876 (No personal case. Of 188 cases treated by digital compression he mentions 2 instances of temporal aneurism on page 38. This is a mistake, for the two cases are obviously one and the same. 1. Bouvier: Medical Times, 1861, Nov. 2.—Digital compression 85 hours of compression. This is undoubtedly Mirault's case, mistakingly attributed by Fischer to Bouvier. 2. Mirault: Gaz. d. hôp., Paris, 1860, xxxiii, 587—Male, age 9, pecked by chicken, aneur., size of apple, behind ascending ramus of jaw, digital compression on aneur. for 9 days, 9½ hours daily, cured in 85 hours).
- Fletcher, T. B. E.: Quelques considérations sur la saignée, Thèse de Paris, 1836 (Thesis based on the cases of Maclachlan, p. 8 and Green, p. 10; no personal observation).
- Follin, E.: Anév. des art. externe du crâne, Traité élément. de Pathol. ext., Paris, V. Masson et Fils, 1865–1867, T. ii, pp. 418–422 (Says Pétrequin, Decès, Malgaigne, Frestel, and Pavesi have observed aneur. of the temporal artery or of its branches, and Moore an arterio-venous variety, but gives no case of his own).
- Gallozzi, C.: Aneur. circoid. traum. della region. temporo-parietale destra; oper. alla Terrier; guarigione; present. dell'infermo, Boll. della R. Accad. Medico-Chir. di Napoli, 3: 127–136, (1891) 1892, (Although this aneurism is classified as a circoid aneur., it has all of the appearances of an arterio-venous fistula).
- Gibson, Wm.: Treatment of Aneurism by Anastomosis, Gibson's Institutes and Practice of Surg., Phila., Carey, Lea and Blanchard, 1835, 4. ed., vol. ii, pp. 339–342; also Gibson's Institutes and Practice of Surgery, Phila., James Kay, Jr. and Brother, 1850, 8. ed., vol. ii, pp. 397–400.
- Gourmelen, Estienne: Le guide des chirurgiens, Paris, Meturas, G., 1647, Le sommaire de toute la chir., trad. par Malesieu, A. (No observation of temporal aneur.).
- Gross, S. D.: Gross' System of Surgery, Phila., H. C. Lea's Son and Co., 1882, 6. ed., vol. i, p. 749 (Cites McNamara's case).
- Hahn, E.: Traumatisch bedingte Aneurysmen der Arteria temporalis, Inaug.-Diss., Königsberg, 1931 (An excellent article. It is primarily a histological study of the specimens removed from 3 cases by Erb).
- Hahn, O.: Die Kriegerverletzung der Blutgefäesse, Beitr. z. klin. Chir., Tuebingen, 124: 241–314, p. 297, next to last paragraph, 1921, (Out of 195 cases of war aneurism in H. Küttner's material, Hahn could find only 2, or 1 per cent., that arose from the temporal artery).
- Heine u. Koerte: Ueber Angioma arteriale racemosum (Aneur. Circoides) am Kopfe, etc., Prag. Vierteljahrsschrift f. prakt. Heilk., 103: 135, 1869; also Prag. Vierteljahrsschrift f. prakt. Heilk., 104: 1–57, 1869, (Collected 7 cases of arterio-venous aneur., and 74 cases of circoid disease of the scalp, some of which were classed by others as arterio-venous fistulae).
- Justi, K.: Histologische Untersuchungen an Kriegsaneurysmen, Frankfurter Ztschr. f. Pathol., Wiesbaden, 20: 181–298, 1917, (A very good article on the histological structure of traumatic aneurisms in general, also cites Müller's case of temporal aneurism).
- Küttner, H.: Meine Erfahrungen in der grossen Blutgefässstamme, Berl. klin. Wochschr., 53: 101 and 132, p. 138, 2nd column, 2nd paragraph, 1916, (Says that he has operated on 93 cases of war aneurisms among them 1 of the temporal artery, but gives no further data).

- Laugier in Robert, A.: *Considérations prat. sur les varices artérielles du cuir chevelu*, *Gaz. de hôp. Civils et Militaires*, Paris, année xxiv, 3.s., 3: pp. 121, 127, 130, 1851; also *Bull. de l'Acad. Nationale de méd.*, Paris, 16: 384-394, 1850-1851, (Arterio-venous aneur. between post. auricular artery and its vein).
- Lisfranc: *Des diverses methodes et des différens procédés pour l'oblitér. des artères*, etc., *Thèse de Concours*, Paris, 1834 (Of 179 external aneurisms, he found 2 of the temporal artery, but it suffices to read the reports of these 2 cases to convince oneself that one was an erectile tumor (Pelletan's) and the other a circoid aneurism (Wardrop's)).
- Maclachlan, G. M.: *Case of Pulsating Tumor of the Scalp from Dilatation of Branches of External Carotid Artery*, *Glasgow Med. Jour.*, 1: 81-87, 1828; also *Lancet*, London, 1: 733-734 (abst.), 1827-1828; also in Syme, *Aneur. Cond. Post. Auricular and Temporal Arteries*, *Edinburgh Med. and Surg. Jour.*, 21: 68-69, 1829; also in *Lancet*, London, 1: 598, 1828-1829, discussion on Syme's article, *Aneur. Cond. Post. Auricular and Temporal Arteries*; also in Holmes' *System of Surgery*, Phila., Henry C. Lea's Son and Co., 1881, revised by J. H. Packard, 1st Amer. ed., from 2nd English ed., vol. ii, p. 393, column 1, line 19; also in Pilz, C., *Zur Lig. der arteria Carotis communis*, etc., *Arch. f. klin. Chir.*, 9: 328, case 325, 1868; also in Crisp, *A Treatise on the Structure, Diseases, etc., of the Blood Vessels*, London, 1847, p. 276; also in Norris, G. W., *Statistics of the Mortality of Tying the Carotid Arteries*, etc., *Amer. Jour. Med. Sc.*, Phila., n.s., 14: 20, case 19, 1847; also in Boyer, A. *Traité des mal. Chir. etc.*, Paris, 1814, 1. ed., T. ii, p. 295 (Holmes, Pilz, Crisp, Norris, and Boyer, considered it to be a circoid aneurism).
- Magistel, A. J. L.: *Traité prat. des émissions sanguines*, Paris, Baillière, 1838, p. 64 (Says Cloquet observed 2 aneurisms in a patient upon whom Béchard had opened the temporal artery at 2 places; we could not find any other mention of the case).
- Malagodi: *Raccogliatore medico di Fano*, 1839, May (This is apparently an error. However the case appears to be a genuine example of temporal aneur. Malagodi incised the sac, after tying the central end of the artery, then united the edges of the wound with a twisted suture. On the 5th day repeated hemorrhages compelled him to remove the suture and to resort to compression. The commentator remarks that Malgaigne is in reality the first who applied this procedure to the cure of aneurism).
- Malbran, J. C. Bidart: *Aneurisma arterio-venosa del cuero cabelludo (arterio-venous aneurism of the scalp)*, *La Prensa Médica Argentina*, Buenos Aires, 15: 1533-1537, 1928-1929, (Arterio-venous aneurism between posterior auricular artery and a neighboring vein; cured by operation).
- Malgaigne: *Considérations prat. sur les varices artérielles, ou anév. circoide du cuir chevelu* par A. Robert. *Indication d'un nouveau procédé*, *Rev. med.-chir.*, Paris, 9: 235, 1851.
- Marsh: *Clin. Soc.*, London, 13: 64, 1879, (This reference is apparently an error, no case of temporal aneurism registered here; the article is by H. Mayo).
- Matas, R.: *Vascular Surgery*, Keen's Surgery, Phila., W. B. Saunders Co., 1911, vol. v, 1-350.
- Mérat in Bégin: *Dict. de méd. et de chir. prat.*, Paris, 1829-1836, T. ii, p. 390, article—Anév. (No case of temporal aneurism to be found here, nor is it in *Jour. des progrès d. sc. méd. et institutions méd. en Europe, en Amer.*, etc., Paris, 1830, 2.s., T. ii, 215, as stated by Velpeau in his *Nouveau élément de méd. opératoire*, 1839, T. ii, p. 210. This is apparently an error as no such case is mentioned there, only the obs. of Stone).

- Moreau in Pelletan, Ph. G.: Tumeur variqueux située en haut de la région frontale, et communiquant dans le crâne; cauterisation; mort du malade, Pelletan's Clin. Chir., Paris, J. G. Dentu, 1810, T. ii, p. 76, obs. 14 (This is a case either of sinus pericranii or circoid aneurism).
- Norris, G. W.: Statistics of the Mortality of Tying the Carotid Arteries, etc., Amer. Jour. Med. Sc., Phila., n.s., 14: 13-40, 1847, (Contains no case of temporal aneurism).
- Onderdonk, J.: Case of Diffused Aneurism from the Temporal Artery, New York Med. Mag., 1: 146, 1814-1815, (This is a very questionable case. From the description it appears to be a hematoma).
- Pelletan, Ph. G.: Pelletan's Clin. Chir., Paris, J. G. Dentu, 1810, T. ii, p. 59; also in Boyer, Traité de mal chir., etc., Paris, 1814, T. ii, 1. ed., p. 295; also in Chassaignac, Les tumeurs de la voute du crâne, Thèse de Concours, 1848, p. 102 (Case described as a varicose aneurism but may have been an arterio-venous fistula).
- Percy: Not able to confirm (According to Lisfranc, Précis de Méd. opératoire, 1845-1848, iii, 148, Percy had observed a temporal aneur.).
- Petit, J. L.: Traité des maladies chirurg. et des opérations, etc., Paris, 1780, new ed., posthumous, T. i, chap. ii, pp. 49-51, article, Des plaies de la tête (Case related by Santi, Des tumeurs anév. de la région temporale, Arch. gén. de méd., Paris, 2: 7.s., 14: 543 and 679, 1884; also Arch. gén. de méd., Paris, 1: 7.s., 15: 172, 1885, has the characteristics of a pulsating hematoma, not of an aneurism).
- Pilz, C.: Zur Lig. der arteria Carotis communis, etc., Arch. f. klin. Chir., 9: 251-445, 1868, (No case of temporal aneur. mentioned).
- Pitha u. Billroth: Handbuch d. allg. u. spec. Chir., 1865, Bd. ii, Abt. 2., S. 154, article by O. Weber.
- Purmann: Could not find the original article (He is said to have observed a temporal aneurism).
- Robert, A.: Considérations prat. sur les varices artérielles du cuir chevelu, Gaz. de hóp. Civils et Militaires, Paris, année xxiv, 3.s., 3: pp. 121, 127, 130, 1851; also Bull. l'acad. Nationale de méd., Paris, 16: 584-594, 1850-1851, (Classifies Ruzf and Chelius' cases as arterio-venous aneur. of the temporal artery; also gives final disposition of a case of circoid aneur. operated on by Dupuytren 32 years before).
- Rognetta: De traitement des anév. a l'aide de electro-punct., Ann. de thèra., Paris, 4: 259-267, 1846-1847, (Questions the claims of Pétrequin of being the first to use galvano-puncture in the treatment of aneurism; no case of temporal aneurism reported).
- Rufz in Bérard, A.: Anévrysme variqueux de la carotide externe, Bull. d. l'Acad. royale de méd., Paris, 3: 278, 1838-1839; also in Terrier, F., Des anév. circoides, Thèse d'Aggreges, Paris, Germer-Baillière, 1872, p. 99, obs. 20 (Bérard questions the correctness of the diagnosis and classes the affection as a circoid aneur. On the other hand Bruns, in his Handb. d. prakt. Chir., Tuebingen, 1854, Abt. 1, S. 149-185, considered it as an arterio-venous aneur.).
- Santi, L. de: Des tumeurs anév. de la région temporale, Arch. gén. de méd., Paris, 2: 7.s., 14: w.s., 104: 543 and 679, 1884; also Arch. gén. de méd., Paris, 1: 7.s., 15: w.s., 105: 172, 1885, (A most comprehensive study which lists 40 cases of temporal aneurism).
- Schuttelaere: Considérations sur les anév. externe de la tête, Thèse de Paris, 1881 (General discussion; no personal case).
- Simon, E.: Kriegschirurgische Mitteilungen aus dem Völkerkriege, 1914-1917, Deut. Ztschr. f. Chir., Leipzig, 143: 79-138, see tables on pp. 100, 102, 106 and

- 108, 1917, (Out of 982 aneurisms consecutive to wounds received in battle Simon tabulates 8, or 0.8 per cent., of the temporal artery, viz.: Bier 4, one of which was arterio-venous; v. Haberer, 1; Holzwarth, 2, and Küttner, 1).
- Spruner-Merz, E. v.: *Ueber traumatische Aneurysmen*, Inaug.-Diss., Erlangen, 1877 (A very good casuistic study on traumatic aneurism. Besides a full account of Heineke's case, the article lists 8 other cases of temporal aneurism or 9 out of 332 cases, a percentage of 2.5 for the series; 1 was arterio-venous).
- Syme, J.: *Principles of Surgery*, 1837, 2.ed., p. 84; also *A Case of Aneurismal Condition of the Posterior Auricular and Temporal Arteries*, *Lancet*, London, 1: 597-598, 1828-1829; also *Edinburgh Med. and Surg. Jour.*, 21: 66-72, 1829, (Contains in addition to an account of his own case, a description of those of Pelletan, of Wardrop and of MacLachlan. All of these cases are probably instances of circoid aneurism and are so considered by Crisp, by Holmes, by Wyeth, by Pilz and by others).
- Terrier, F.: *Des anév. circoides*, Thèse d'Aggrégés, Paris, Germer-Bailliére, 1872, p. 99 (Considered Ruz's case questionable).
- Tillaux: *Traité de anat. topograph. avec applications a la chir.*, Paris, Asselin, 1875-1877, Part 1, p. 25, article, *Du crâne*, (On p. 9, he says it may be the site of arterial varix, and on p. 28, remarks that Laugier some time ago described an example of arterio-venous aneurism of the temporal vessels, but he is in error, as it was an aneurism of the post. auricular vessels; article contains no personal obs. of temporal aneurism).
- Velpeau, Alf. A. L. M.: *De la contusion*, Thèse de Concours, Paris, 1833; also *Nouveau élément de méd. opératoire*, 1839, T. ii, p. 210 (Mentions Mérat's case; says pulsating hematomas have been confused with aneur.; contains no personal obs. of temporal aneur.).
- Verneuil, A.: *Du traitement d. l'anév. circoide ou varice artérielle*, *Gaz. hebdom. de méd. et de chir. de Paris*, 5: 101-104, 1858.
- Virchow: *Die Krankhaften Geschwulste*, 1867, Bd. iii, S. 471.
- Wardrop: *Case of Rare Aneurismal Disease of the Temporal Arteries and Ligation of the Carotid*, *Lancet*, London, 12: 762 and 798, 1827; also *Lancet*, London, 1: 24, 47, 656 and 665, 1827-1828; also in Mayo, H., *Interesting Dissecting Aneur. by Anastomosis*, *London Med. Gaz.*, 1: 260-262, 1827-1828; also *Medical Quarterly Review*, London, 1: 410, 1833-1834; also in Syme, J., *Edinb. Med. and Surg. Jour.*, 21: 67, 1829; also in Crisp, *Treatise on Structure, etc., of Blood Vessels*, London, 1847, p. 225; also in Norris, G. W., *Amer. Jour. Med. Sc.*, Phila., n.s., 14: 20, case 18, 1847; also in Wyeth, J. A., *Trans. Amer. Med. Assn.*, Phila., 29: appendix, 94, case 735, 1878; also in Holmes, T., *Holmes' System of Surgery*, Phila., ed. by Packard, 1881, vol. ii, p. 394 (Considered by Crisp, Holmes, Wyeth and others as a circoid aneurism).
- Wood, J.: *A Case of Arterio-Venous Aneurism of the Scalp of 30 Years' Duration; Oper.; Cure; Remarks*, *Lancet*, London, 2: 255, 1881, (Description vague, indifferent, sounds like a circoid aneurism); also *Aneurysma Arterio-venosum*, *Jahresbericht ü. d. Leistungen u. Fortschritte i. d. gesamt. Med.*, Berlin, Jahrgang 16, 2: 303, (1881) 1882.
- Wyeth, J. A.: *Essays on the Surg. Anat. and History of the Common, External and Internal Carotid Arteries, etc.*, *Trans. Amer. Med. Assn.*, Phila., 29: appendix, 5-139, 1878, (Table on page 98 contains Törnroth's case, see # 773).

BULLETIN

OF THE
SCHOOL OF MEDICINE, UNIVERSITY OF MARYLAND

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STANDISH McCLEARY, M.D.

In the death of Standish McCleary which occurred November the nineteenth, the medical department of the University of Maryland has lost an outstanding teacher. Doctor McCleary was born in Baltimore on January the nineteenth, 1870, the son of John W. and Ella Snyder McCleary, both of Jefferson County, West Virginia. His father was a confederate soldier, who served with distinction as a member of Company D, Twelfth Virginia Cavalry, Laurel Brigade, Army of Northern Virginia. His mother was a greatly esteemed resident of Shepherdstown, a sister of Mr. H. L. Snyder, the editor of the Shepherdstown Register.

He received his preliminary education in the public schools of Baltimore, entering the College of Physicians and Surgeons at an early age, graduating with high honors in 1890.

He served an internship in the Mercy and Bay View Hospitals from 1890 to 1894 and then entered the practice of Medicine specializing in pathology and clinical medicine. He soon associated himself actively with the teaching staff of the College of Physicians and Surgeons. In succession he became professor of histology and pathology at the College, professor of pathology at the Medical School of Maryland University and professor of pathology and clinical medicine at the same school. He was visiting physician at Mercy Hospital and the University Hospital, a member of the medical council of Maryland University and a member of the board of governors of Mercy Hospital. He was for many years one of the post mortem examiners for Baltimore City. His skill as a pathological microscopist was well recognized and frequently his authoritative opinion was called upon for final judgment.

His contact with his students was cordial and his ability and enthusiasm as a teacher was recognized by them; he was an ideal teacher;



DR. STANDISH McCLEARY

few of the instructors won the affection and the intimate relations of confidence and respect of the students in the measure that Dr. McCleary did. He was a capable diagnostician and possessed the ability to simplify intricate problems in medicine. It was his rare ability to apply his clear conceptions of pathology to the problems of medical practice to which he owed this preeminence. On the other hand, he never failed to reveal in all the years of his teaching the human side of medicine and his sympathy, kindness and patience with the sick. This accounted in a large measure for the rare devotion with which patients clung to him, throughout the years.

It was in association with his medical confreres that his knowledge of pathology in its relation to clinical medicine was most evident and his rare and keen wit added greatly to the enjoyment of his friends. His keen sense of humor was especially manifested whenever he met colleagues in social relations. As a member of the Research Society of the College of Physicians and Surgeons for over thirty years, he never missed a meeting nor ever failed to enliven the meetings with his humor, wit and wisdom.

His devotion and fidelity to his friends not only of his own period but with those both younger and older than himself, revealed a capacity for friendship that is rare. Out of the number of such beautiful relationships could be mentioned none perhaps, of a more lovely type than that that existed between him and the late Doctor William F. Lockwood. He never tired of relating interesting incidents in their friendship and conversations; his memory was indeed marvelous in its accuracy.

But of all the relationships of his life, one stood out above all others, the filial devotion to his mother. Between them, there was that complete understanding and devoted affection than which there is nothing more beautiful in human life. We have mentioned his kindness and sympathy, but there are few who were more severe in their judgment of any wrong-doing in professional relations; then he was not mild in his condemnation, it mattered not how high the position or the power of the individual.

Doctor McCleary's intellectual interests were very wide and extended far beyond the limits of medicine or of science; he was a great and discriminating reader, a good judge of literary value, especially devoted to classical literature. In a similar way he was devoted to music.

Doctor McCleary will long be remembered for his lofty ideals and high qualifications. In his death the medical profession has sustained a great loss and his associates and friends will ever miss his genial and devoted companionship.

JULIUS FRIEDENWALD

PROCEEDINGS

OF THE

UNIVERSITY OF MARYLAND BIOLOGICAL SOCIETY

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EIGHTH ANNUAL MEETING

On Tuesday, November 6, 1934, the Eighth Annual Meeting of the University of Maryland Biological Society was held in the Pharmacy Building. The meeting was called to order at 7:40 P.M. by President Krantz. The regular business of the Society was conducted and the following officers were elected to serve for the ensuing year:

President.....	C. O. APPLEMAN
Presidential Representative.....	EDUARD UHLENHUTH
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The Sixty-second Program Meeting of the University of Maryland Biological Society was held Tuesday, November 6, 1934, in the Pharmacy Building. In the absence of President Appleman, Presidential Representative Uhlenhuth presided. Abstracts of the papers which were presented appear below.

ARGYREMIA: DETECTION OF UNSUSPECTED AND OBSCURE ARGYRIA BY SPECTROGRAPHIC DEMONSTRATION OF HIGH BLOOD SILVER

BY HAROLD BLUMBERG, Sc.D.* AND T. NELSON CAREY, M.D.**

A patient with anemia, peculiar ashy pallor, and a grey blue line on the gums, was suspected of having lead poisoning. A spectrographic examination of the blood showed no evidence of lead poisoning; however, a significant argyremia, or high blood silver, was demonstrated. It was later discovered that the patient had in-

gested ten grams of silver nitrate during the previous year, in small daily doses, taken for gastrointestinal symptoms. Abnormal silver was also found in the urine, feces, cerebrospinal fluid, saliva, skin, and dental tartar.

Using the silver lines of wave lengths 3280.67 and 3282.89 Angstrom units (raies ultimes, or most persistent lines of silver), the method was found sensitive for as little as 0.0005 mgm. per 100 cc. The major part of the blood silver was found in the plasma, a minor fraction was present in the cells after several washings. Examination of over 200 controlled spectrograms revealed the frequent occurrence of silver, but only in faint traces. The blood of the patient, however, contained approximately 0.05 mgm. per 100 cc. Only faint traces were found in the blood of three old cases of argyria of more than ten years duration.

Even three months after ingestion ceased, large amounts of silver were still found in the blood, urine and feces of the patient. The continued presence of silver in the blood and excreta demonstrated the mobile condition of the metal and its slow partial elimination from the body.

The spectrographic examination of blood is suggested for differentiating obscure argyria from lead or bismuth intoxication, and as a means of guarding against argyria in silver therapy.

* From the Biochemical Laboratory, School of Hygiene and Public Health, Johns Hopkins University.

** From the Department of Medicine, School of Medicine, University of Maryland.

THE DIFFERENCE OF RESPONSE OF THE PITUITARY GLANDS OF MALE AND FEMALE ALBINO RATS TREATED WITH THE GROWTH HORMONE

BY H. S. RUBINSTEIN,* M.D., PH.D.

Seventy-four albino rats were divided according to sex and each sex subdivided into three subgroups, according to weight. The lightest animals were used as test animals and the heavier rats were used as controls. At the beginning of the experiment all animals had reached the adult state being six to eight months of age. The test animals were injected intraperitoneally daily (except Sunday) with 2 cc. of growth hormone for twenty-two weeks.

The controls were subdivided into two groups, the heavier of which received no injections, while the lighter controls received injections of a meat extract prepared and administered similar to the growth hormone.

Body weights were taken before each week and at the end of the experiment at which time the test animals had gained significantly over their controls. The animals were then anesthetized and killed by bleeding through the carotids and their pituitary glands removed and weighed. The data thus obtained were studied and the significance of any differences noted, were tested by statistical methods.

It was concluded on the basis of this study that the pituitary glands of male and female albino rats respond differently to the administration of growth hormone in that the normally smaller pituitary gland of the male becomes significantly heavier while the naturally heavier gland of the female fails to increase but is somewhat retarded in its growth.

* From the Department of Neuro-Anatomy, School of Medicine, University of Maryland.

SIXTY-THIRD PROGRAM MEETING

The Sixty-third Program Meeting of the University of Maryland Biological Society was held Tuesday evening, December 4, 1934, in the Pharmacy Building. President Appleman presided. Abstracts of the papers which were presented appear below.

THE FATE OF DULCITOL AND DULCITAN IN THE ANIMAL BODY

BY JOHN C. KRANTZ, JR., AND C. JELLEFF CARR*

Following a study of mannitol and mannitan the corresponding isomeric alcohol, dulcitol, and its anhydride, dulcitan, were investigated from the standpoint of metabolism.

Rats fed mixtures of one-third dulcitol or dulcitan with a basal fat diet showed only an average of 0.5% liver glycogen for dulcitol and no storage at all for dulcitan. Each substance tends to reduce tissue glycogen. Neither one of these substances affects the R. Q. of white rats or is effective in relieving insulin shock in mice.

Both dulcitol and dulcitan are without influence on the blood sugar level in rabbits when given by stomach tube and both are partially excreted in the urine unchanged.

Dulcitol and dulcitan are not toxic in quantities found to produce death or serious respiratory depression when mannitol or mannitan is administered.

* From the Department of Pharmacology, School of Medicine, University of Maryland.

THE ACTION OF TRICHLORETHYLENE ON THE PERFUSED LEG
VESSELS OF THE FROG

BY JOHN C. KRANTZ, JR., C. JELLEFF CARR AND WILLIAM G. HARNE*

Perfusion of the frog's hind legs by the method of Trendelenburg produced control values of the number of drops of perfusate passing through the exit cannula. When a saturated solution of C. P. trichlorethylene in the perfusion fluid was introduced into the perfusion flow, even in concentrations of 1-2 cc. there was a decrease in the number of drops from approximately 29 to 2. This experiment was repeated a number of times with concordant results. This reduction in the flow was antagonized by the injection of insulin-free pancreatic extract marketed by Sharp and Dohme as Tissue Extract No. 568.

It is of interest that these therapeutic agents, used in the treatment of angio-spastic disease should antagonize the action of each other on the blood vessels of the frog.

* From the Department of Pharmacology, School of Medicine, University of Maryland.

The Sixty-fourth Program Meeting of the University of Maryland Biological Society was held Tuesday evening, January 15, 1935, in Chemical Hall in the Medical School building. President Appleman presided. An abstract of the paper presented appears below.

THE CHEMICAL DIAGNOSIS OF PREGNANCY

BY MAURICE J. SCHMULOVITZ, A.B. AND H. BOYD WYLIE, M.D.*

A brief survey of the chemical tests for pregnancy proposed in the present century was given. A new test, differing from all those proposed in that it tests for hormone, was described. This test is based on the extraction of theelin and theelol from the urine with ether, and the reaction of these compounds with diazotized p. nitroaniline to form a deep-colored azo dye. The depth of the color test is recorded permanently by colorimetric comparison against a ferric chloride solution. Interfering phenols are removed by washing the ether with sodium carbonate and by steam distilling the ethereal residue.

The results of 58 tests made in 38 cases of pregnant and non-pregnant individuals were presented and discussed. The relative merits of prolactin and oestrogen excretion as criteria of pregnancy were briefly discussed, and some of the advantages of a chemical test for pregnancy were pointed out.

* From the Department of Biological Chemistry, School of Medicine, University of Maryland.

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The names listed above are officers for the term beginning July 1, 1934, and ending June 30, 1935.

THE NEW UNIVERSITY HOSPITAL

The new University Hospital was dedicated on December 15, 1934. Dr. Irving S. Cutter, dean of Northwestern University School of Medicine gave the dedicatory address. Other speakers included His Excellency Albert C. Ritchie, governor of Maryland, Reverend Dr. Arthur B. Kinsolving, rector of Old St. Paul's Church, Dr. Alan M. Chesney, dean of Johns Hopkins University School of Medicine and Dr. Raymond Pearson, president of the University of Maryland.

The Hospital is ten stories high, with the center portion extended as a tower to provide five extra floors. The building is in the shape of a cross with wings radiating in four directions from a common center. The laboratories and the special departments have been concentrated on the second floor. The arrangement of the space from the second to the eighth floor has been designed for teaching while the ninth and tenth floors takes care of the private and semi-private pay patients. The Hospital will take care of 394 patients. Seventy-one beds are for private, sixty-five for semi-private and two hundred and fifty-eight for ward patients.

Following the exercises which were held at the Peabody Institute, the building was opened to the public. The visitors were greeted by Dr. R. A. Pearson, president of the University of Maryland and Mrs.

Pearson, and Dr. J. M. H. Rowland, dean of the Medical School. Others in the receiving line were: Dr. and Mrs. R. McC. Chapman, Dr. and Mrs. Eduard Uhlenhuth, Dr. and Mrs. C. L. Davis, Mr. and Mrs. John E. Raine, Dr. and Mrs. A. M. Shipley, Dr. and Mrs. Clyde A. Clapp, Dr. William S. Gardner, Mrs. Cyrus F. Horine, Mrs. J. Charles Linthicum, Dr. and Mrs. A. J. Lomas, Dr. and Mrs. M. C. Pincoffs, Dr. Randolph Winslow, Mrs. Charles R. Posey, president of the Woman's Auxiliary Board of the University Hospital and Miss Annie Crighton, superintendent of nurses, University Hospital.

ITEMS

At its biannual meeting held in January last, the Woman's Auxiliary Board of the University Hospital elected the following officers for the biennium 1935-1936:

Executive Board

President.....	Mrs. Page Edmunds
1st Vice President.....	Miss Florence P. Sadtler
2nd Vice President.....	Mrs. Frank S. Lynn
Treasurer.....	Mrs. A. P. S. Waltham
Rec. Secretary.....	Mrs. Cyrus Horine
Cor. Secretary.....	Miss Rachel Steele

Directors

Mrs. Wm. A. Bridges
Mrs. J. Mason Hundley, Jr.
Mrs. Maurice C. Pincoffs
Mrs. Nina H. Rowe
Mrs. Allen F. Voshell

In behalf of the hospital management, the BULLETIN takes this opportunity to thank Mrs. Charles R. Posey, the retiring president, for her invaluable services to the University Hospital. During her nine years' incumbency of the presidency, she won, by her active and able leadership, the respect and admiration not only of her organization but also of those with whom her duties brought her in contact. At no time in this long period of office did her efforts to advance the welfare of the hospital lag. Further praise is superfluous, the many good things accomplished during her administration, are her monuments.

Dr. K. M. Jarrel, class of 1906, is superintendent of the Pinecrest Sanitarium, Beckley, W. Va. After graduating, he practised at his old home at Clear Creek, Raleigh county, W. Va., for eight years. In the fall of 1914, he took a post-graduate course at Harvard Medical School. On October 12, 1914, he removed to Beckley where he was engaged in private practice until his appointment to the superintendency of Pinecrest Sanitarium, November 18, 1933. He was formerly a member of the staff of the Kings Daughters General Hospital and of the Raleigh General Hospital.

Dr. Cyrus F. Horine, Baltimore, Md., class of 1919, read a paper on "Empyema in Childhood" at the monthly staff meeting of the University of Maryland Hospital, February 18, 1935, and Dr. Howard A. Kelly, emeritus professor of gynecology, Johns Hopkins Medical School gave a delightful talk on the many wonderful changes that he had witnessed since he graduated in medicine.

Dr. David Sashin, New York, N. Y., class of 1926, was awarded by the American Academy of Orthopedic Surgeons, at its recent convention in New York city, a certificate of honorable mention for his exhibit of pathological specimens of intervertebral disks. Dr. Sashin is adjunct orthopedic surgeon to the Hospital for Joint Diseases and the Bronx Hospital, and is chief of the Arthritis Clinic of the Hospital for Joint Diseases. His practice is limited to orthopedic surgery.

At the regular monthly staff meeting of the University of Maryland Hospital held January 21, 1935, the program was as follows:

1. Chemical Diagnosis of Pregnancy.....Dr. H. Boyd Wylie and
M. J. Schmulovitz
2. Oral Surgery.....Dr. Robert P. Bay
3. Psychiatric Conditions in General Medical
Patients.....Dr. Harry Murdock

At the annual meeting of the Baltimore City Medical Society, alumni were elected to the following offices for the ensuing year:

- Dr. Frank S. Lynn (class of 1907).....*President*
 Dr. C. C. W. Judd (associate professor of medicine).....*Vice-President*
 Dr. Francis J. Geraghty (class of 1926).....*Secretary*
 Dr. C. Emil Brack (P. & S., class of 1895).....*Treasurer*
 Dr. Charles R. Goldsborough (class of 1919).....*Member of the House of Delegates*
 Dr. T. Nelson Carey (class of 1927).....*Member of the House Delegates*
 Dr. W. Houston Toulson (class of 1913).....*Member of the House of Delegates*

Dr. Howard M. Bubert, Baltimore, class of 1920, read a paper on "Fatal Asthma," before the Baltimore City Medical Society, January 4, 1935.

Dr. Loring C. Joslin, Baltimore, class of 1914, read a paper on "Vitamin B Complex—Report of its Effects on Infants" and Dr. Edgar B. Friedenwald, Baltimore, P. & S., class of 1903, on "Feeding Problems in Children" before the Pediatric Section of the Medical and Chirurgical Faculty of Maryland, January 8, 1935.

Dr. E. M. Vrooman, B.M.C., class of 1903, is engaged in general practice in North Adams, Massachusetts. He is also school physician and owner and director of Dr. Vrooman's Sanatorium in that city.

Dr. L. F. Playse, B.M.C., class of 1906, practises general medicine at 14 Church Street, Hopkinton, Massachusetts, and is a member of the staff of the Union Hospital of Framingham.

Dr. Emmet W. Barry, P. & S., class of 1897, resides and practises at 141 Church Street, Whitinsville, Massachusetts.

Dr. Henry P. Talbot, class of 1927, is director of the bureau of venereal diseases of the Connecticut State Department of Health. He may be addressed at the State Office Building, Hartford, Connecticut.

Dr. Charles J. Hanson, B.M.C., class of 1904, is school physician and member of the school committee of Easthampton, Massachusetts. He resides and practises general medicine at 15 Park Street, that city.

Dr. Charles H. Mace, B.M.C., class of 1900, is school physician and chairman of the board of health at West Springfield, Massachusetts. He resides and practises at 612 Westfield Road in that city.

Dr. Thomas P. Murdock, B.M.C., class of 1910, is secretary of the Connecticut Board of Medical Registration. He resides and practises at 147 W. Main Street, Meriden, Connecticut.

Dr. Walter J. Keefe, class of 1931, specializes in the diseases of the eye, ear, nose, and throat, at 30 Sisson Avenue, Hartford, Connecticut. With him is his brother, Dr. George G. Keefe, class of 1922, whose practice is confined to internal medicine.

The following alumni are practising in metropolitan Boston:

Dr. A. L. Ballou, B. M. C., class of 1905, 280 Neponset Avenue, Dorchester

Dr. Ralph C. Achorn, B. M. C., class of 1908, 25 Huntington Avenue, Boston

Dr. J. E. Walsh, B. M. C., class of 1898, 223 Beach Street, Revere

Dr. C. W. Finnerty, P. & S., class of 1913, 395 Commonwealth Avenue, Boston

Dr. Benjamin Parvey, B. M. C., class of 1907, 636 Beacon Street, Boston

Dr. Francis A. Robinson, B.M.C., class of 1894, is engaged in general practice at Worthington, Massachusetts.

Dr. Mortimer T. Cavanaugh, B.M.C., class of 1898, practises general medicine at Great Barrington, Massachusetts. He is a member of the school committee and board of health, as well as school physician and member of the staff of the Fairview Hospital, Great Barrington. He is chairman of the Southern Berkshire Union Health District, a joint public health activity of six towns in the southern part of Berkshire County, Massachusetts, the Massachusetts Department of Public Health, and the Commonwealth Fund of New York City.

Dr. M. S. Eisner, P. & S., class of 1912, is engaged in the practice of surgery at 86 North Street, Pittsfield, Mass. He is a fellow of the American College of Surgeons.

Dr. Reid Hunt, P. & S., class of 1896, professor of pharmacology at Harvard Medical School, is a member of the Editorial Board of the New England Journal of Medicine and chairman of the Council of Pharmacy and Chemistry, American Medical Association.

The following Massachusetts Alumni are fellows of the American College of Surgeons:

Dr. R. H. Morris, B. M. C., class of 1896, 35 Corey Street, Everett
Dr. Halbert G. Stetson, P. & S., class of 1895, 39 Federal Street, Greenfield
Dr. A. H. Riordan, class of 1915, 156 Main Street, Indian Orchard
Dr. M. S. Eisner, P. & S., class of 1912, 86 North Street, Pittsfield
Dr. Henry E. Doonan, B. M. C., class of 1908, South Hadley Falls
Dr. H. F. Byrnes, B. M. C., class of 1904, 67 Chestnut Street, Springfield
Dr. C. B. Faunce, Jr., B. M. C., class of 1904, 390 Commonwealth Avenue,
Boston

Dr. Frank C. Angell, B.M.C., class of 1894, is engaged in the practise of medicine and surgery at Randolph, Vermont. He is a fellow of the American College of Surgeons and a member of the staff of the Gifford Memorial Hospital at Randolph.

Dr. Charles E. Gill, M.D., Westfield State Sanitorium, Westfield, Massachusetts, class of 1927, is secretary of Massachusetts Alumni of the University of Maryland.

WEDDINGS

Dr. Arthur J. Philip, Rockville Center, N. Y., class of 1932, was married on June 24, 1934, to Miss Ruth Ortman, B.A. (Hunter) and M.A. (Columbia). Dr. Philip is engaged in general practice. Mrs. Philip and he reside at Broadway and Lakeview avenue, Rockville Center.

Dr. Jacob Wheeler Bird, Sandy Spring, Md., class of 1907, was married on January 11, 1935, to Miss Jean Woolford Skinner, daughter of Mr. and Mrs. William Woolford Skinner.

DEATHS

- AMBROSE, SAMUEL ELLSWORTH, Rural Valley, Pa.; B. M. C., class of 1898; aged 70; died, January 4, 1935, of myocarditis and chronic nephritis.
- AUGUR, FRANK ALLEN, South Bethlehem, N. Y.; P. & S., class of 1886; aged 70; died, December 2, 1934, of bronchopneumonia.
- BADGETT, WILLIAM STEDMAN, Baltimore, Md.; chief pharmacist to the University Hospital, died, December 29, 1934, of cardiac disease. Mr. Badgett was stricken at his work in the hospital and was pronounced dead a few minutes later. He was born in Chillsboro, N. C. He came to Baltimore as a young man and was graduated from the Pharmacy School of the University of Maryland. He served the University Hospital, long, well and efficiently and was held in the highest regard and respect by all with whom his work threw him in contact.
- BARTHO, BENJAMIN F., Mount Carmel, Pa.; P. & S., class of 1887; bank president; aged 72; died, December 30, 1934.
- BEYNON, JOHN HERRINGTON, Naponoch, N. Y.; P. & S., class of 1888; aged 68; died, October 20, 1934, of cardiac disease.
- BICKING, CLARENCE AUSTIN, Pittsburgh, Pa.; B. M. C., class of 1913; aged 49; died, November 21, 1934, of cardiac disease.
- BLANKENSHIP, WILLIAM HUNT, Pine Bluff, Ark.; P. & S., class of 1893; aged 68; died, December 12, 1934, of carcinoma of the intestine.
- BRYAN, GEORGE CORBIN, Barstow, Calif.; B. M. C., class of 1896; aged 64; died, November 3, 1934, of diabetes mellitus.
- CAMPBELL, JOHN ALEXANDER, Williamsport, Pa.; P. & S., class of 1901; member of the House of Delegates of the American Medical Association, 1924-1927, 1929-1931; treasurer and past president of the Lycoming County Medical Society; aged 59; died, January 4, 1935, of influenza and pneumonia.
- CHITWOOD, OREN A., Fort Worth, Tex.; P. & S., class of 1883; aged 77; died, November 6, 1934, of angina pectoris.
- COLLENBURG, JOHN HENRY, Baltimore, Md.; class of 1879; aged 82; died, November 13, 1934, of hypertension, arteriosclerosis and cerebral hemorrhage.
- COMAS, PHILIP H., Baxley, Ga.; class of 1882; member of the state legislature and formerly state senator; aged 73; was found dead, October 19, 1934, of cardiac disease.
- CORNELL, FREDERIC BURTON, Aurora, Col.; P. & S., class of 1902; aged 58; died, January 16, 1935, of cardiac disease.
- CRISWELL, DAVID M., Coshocton, Ohio; B. M. C., class of 1892; formerly member of the state legislature; city and county health officer; aged 69; died, October 21, 1934, of cardiac disease.
- CURRAN, WILLIAM FERRIS, Waco, Texas; class of 1904; member of the Associated Anesthetists of the United States and Canada; county health officer; aged 61; died, October 15, 1934, of cirrhosis of the liver and esophageal hemorrhage.
- DAME, FRED RUSSELL, Athol, Mass.; B. M. C., class of 1897; aged 62; died, December 21, 1934, of a fractured skull received in an automobile accident.
- DAVIS, GEORGE HEALY, Springfield, Mass.; P. & S., class of 1897; aged 84; died, October 28, 1934, of arteriosclerosis.
- DAVIS, HORACE M., D.D.S., Baltimore, Md.; University of Maryland Dental School, class of 1905, professor of exodontia and radiography at his alma mater and a consultant in dentistry to the University Hospital; aged 53; died, February 8, 1935, of accidental asphyxiation by gas.
- DELEVETT, JAMES MELVIN, Baltimore, Md.; B. M. C., class of 1903; aged 62; died, January 18, 1935 of pneumonia. He was born in Harford County, Md., and was a graduate of Western Maryland College. For a time he was chief resident physician at the Maryland General Hospital. He was a member of the school-board from 1911 to 1920 and served on the draft board during the World War.
- EDMONDS, HENRY JETER, Kilmarnock, Va.; class of 1887; past president of the Northern Neck Medical Society; aged 68; died, December 13, 1934, of cerebral hemorrhage.
- FRANKLIN, A. LEO, Cumberland, Md.; class of 1902; aged 54; died, November 19, 1934, of cardiac disease.

- FITZHUGH, HENRY MAYNADIER, Westminster, Md.; class of 1897; member of the House of Delegates of the American Medical Association, 1933-1934; president of the Federation of State Medical Boards of the United States; since 1910 member and since 1924, secretary and treasurer of the state board of medical examiners of Maryland; in 1930, president of the Medical and Chirurgical Faculty of the State of Maryland; president of the state board of education; aged 59; died, January 25, 1935, of osteomyelitis of the femur and septicemia. Born in Bay City, Michigan, September 16, 1875, Doctor Fitzhugh was the son of Henry M. and Lucy Tyson Fitzhugh. The family later moved to Maryland. The father was for some time Clerk of the Court of Baltimore County. Doctor Fitzhugh was a descendant on his father's side of Col. Henry Maynadier, of Revolutionary fame, who extracted a ball from Lafayette's leg at the battle of Brandywine. His mother was descended from the Ellicotts, who settled at the falls of the Patapsco and established flour mills there, and also from the Tysons, who were among the first Maryland Quakers. Dr. Fitzhugh was one of the finest American examples of the old-fashioned family physician and friend. He carried into a home where illness had caused distress not only the skill of the medical men of his kind and the capacity to meet all orders of unexpected emergencies, but also qualities of character which endeared him to his patients. In the years of the World War he served as the chairman of his local draft board and as chairman of the Carroll county branch of the State Council of Defense. The service which he gave to the public positions he held was never perfunctory. A man of strong convictions, he did not hesitate to express them.
- GEORGE, HENRY PAUL, Claremont, N. H.; B. M. C., class of 1912; aged 50; died, January 1, 1935, of carcinoma.
- GOLEY, WILLIAM RANKIN, Graham, N. C.; P. & S., class of 1885; aged 81; died, November 26, 1934, of lobar pneumonia.
- HABLISTON, CHARLES CARROLL, Baltimore, Md.; class of 1914; member of the American Clinical and Climatological Association; associate professor of medicine at his alma mater; served during the World War; aged 44; died, January 17, 1935, of cardiac disease.
- HUGO, JOHN GEORGE, New Haven, Conn.; P. & S., class of 1903; served during the World War; aged 58; died, November 11, 1934, following a short illness.
- KNELL, WILLIAM A., Baltimore, Md.; class of 1905; aged 50; died, November 14, 1934, of carcinoma of the omentum.
- LANE, PAUL PEYTON, Wilson, N. C.; class of 1908; past president of the Wilson County Medical Society; fellow of the American College of Surgeons; served during the World War; aged 47; died, December 30, 1934, of cardiac disease.
- LEVY, ALBERT LAFAYETTE, Baltimore, Md.; class of 1903; aged 52; died, December 29, 1934, of coronary thrombosis.
- LUMPKIN, ROBERT GARRETT LEE, Baltimore, Md.; B. M. C., class of 1892; aged 62; hanged himself, October 8, 1934.
- MACGILL, JOHN CHARLES, Catonsville, Md.; class of 1891; aged 64; died, November 16, 1934, of pneumonia.
- MATTFELDT, CHARLES LEWIS, Catonsville, Md.; class of 1886; past president of the county board of health and formerly county health officer; aged 67; died, October 27, 1934.
- MAY, EDMUND T., Warthen, Ga.; class of 1885; aged 73; died, December 13, 1934, of cerebral hemorrhage and nephritis.
- MCCLEARY, STANDISH, Baltimore, Md.; P. & S., class of 1890; professor of histology and pathology at his alma mater which later became the University of Maryland, School of Medicine, where he was professor of pathology and clinical medicine, aged 64; died, November 19, 1934, of coronary thrombosis.
- MCGILLICUDDY, RICHARD ALOYSIUS, Turners Falls, Mass.; B. M. C., class of 1903; for many years member and chairman of the school board; aged 55; died, November 4, 1934, of chronic valvular cardiac disease.
- MCGUIRE, SAMUEL B., Dover, Ohio; B. M. C., class of 1893; aged 67; died, December 6, 1934, of pernicious anemia.
- McMILLAN, BENJAMIN FRANKLIN, Red Springs, N. C.; class of 1882; formerly member of the state legislature; aged 81; died, January 14, 1935, of pneumonia.
- MELVIN, JAMES A., Baltimore, Md.; class of 1887; aged 71; died, December 6, 1934.
- MILLER, JAMES I., Huntington, W. Va.; P. & S., class of 1906; aged 55; died, January 6, 1935, of pneumonia consecutive to burns received in a gasoline explosion.

- MITCHELL, JESSE H., AHOSKIE, N. C.; P. & S., class of 1879; formerly mayor, postmaster, and justice of the peace; for many years member of the county board of health and board of education; aged 77; died, December 8, 1934, of diabetes mellitus.
- MITCHELL, ROBERT L., Jr., aged 23; son of the popular, Dr. Robert L. Mitchell, of Baltimore, class of 1905; died December 28, 1934. The Bulletin extends to Dr. and Mrs. Mitchell its deepest sympathy.
- MOHN, CHARLES LINCOLN, Jersey Shore, Pa.; P. & S., class of 1885; aged 70; died, December 19, 1934, of cardiac disease.
- MORGAN, WILLIAM T., Braddock, Pa.; class of 1884; aged 76; died, October 9, 1934, of gastric carcinoma.
- MURRAY, THOMAS MORRIS, Pomfret Center, Conn.; class of 1873; formerly emeritus professor of physical diagnosis, laryngology and rhinology, Georgetown University School of Medicine; aged 84; died, December 16, 1934, of coronary thrombosis, diabetes mellitus and cirrhosis of the liver. The son of the late Captain Frank Key Murray and Mrs. Anna Morris Murray, he was born in Howard county, Maryland and was educated at St. John's College, Annapolis. After studying for some time abroad, Dr. Murray practised medicine for a short while in Baltimore and then moved to Washington, where he was active for a number of years as a throat specialist.
- NORRIS, MILTON D., Eldersburg, Md.; P. & S., class of 1892; veteran of the Spanish-American War; aged 63; died, February 17, 1935, of cardiac disease. He was a son of the late Dr. William H. Norris, of Baltimore, class of 1853; surgeon, United States Army, 1861-1865; died at Baltimore, February 2, 1892. Dr. Norris was assistant physician, Spring Grove Asylum, 1892-1896, and assistant superintendent, Second Maryland Hospital for the Insane, Sykesville, 1896-1898, and acting assistant surgeon, United States Army, Spanish-American War, 1898-1899; since that he had been in practice at Eldersburg.
- OATES, THOMAS FRANKLIN, Mexia, Texas; P. & S., class of 1884; aged 78; died, September 16, 1934, of cardiac disease.
- PARCHER, GEORGE CLARENCE, Saugus, Mass.; P. & S., class of 1893; served during the World War; aged 63; died, November 29, 1934.
- POWELL, WILLIAM A., Hernando, Miss.; P. & S., class of 1886; aged 72; died, January 5, 1935, of injuries received in an automobile accident.
- RIMER, JOHN THOMAS, Clarion, Pa.; P. & S., class of 1881; past president and secretary of the Clarion County Medical Society; aged 79; died, October 29, 1934.
- ROACH, JOSEPH, Baltimore, Md.; P. & S., class of 1891; died, October 27, 1934.
- ROSENTHAL, MELVIN SAMUEL, Baltimore, Md.; P. & S., class of 1892; resident physician, Bayview Hospital, 1892; resident physician, City Hospital, now Mercy Hospital, 1893; resident physician, Hebrew Hospital, now Sinai Hospital 1894-1898; professor of dermatology at his alma mater, aged 65; died, February 16, 1935.
- ROWLAND, MRS. MARY VIRGINIA ZOLICKOFFER; wife of Dr. James M. H. Rowland, the dean of the Medical School of the University of Maryland; died, January 17, 1935. The Bulletin in behalf of its readers wishes to extend to Dr. Rowland its sincerest sympathy.
- SCHWARTZ, WILLIAM F., Baltimore, Md.; class of 1907; aged 47; died, October 25, 1934, following an operation for gastric ulcer.
- SMITH, MARSHALL G., Baltimore, Md.; class of 1887; formerly assistant city health commissioner; aged 70; died, January 21, 1935, of influenza. Dr. Smith was born at Columbia, S. C. He was a son of the late Turner and Hattie Macon Smith of Raleigh, N. C. When a boy, he moved to Baltimore with his parents. After studying in the public and high school, he was graduated from the Medical School of the University of Maryland.
- SPICHER, CLARENCE C., Johnstown, Pa.; B. M. C., class of 1903; aged 62; died, January 1, 1935; of cardiac disease.
- SPOONER, WILLIAM R., Fostoria, Ohio; B. M. C., class of 1899; Toledo Medical College (1903); aged 65; died, December 3, 1934, of bronchopneumonia.
- STEEL, CHARLES L., Three Forks, Mont.; class of 1882; aged 74; died the latter part of 1934, of cerebral hemorrhage.
- STURGIS, WALTER HORATIO, Hull, Mass.; B. M. C., class of 1895; served during the World War; member of the board of health; owner of the Sturgis Hospital; aged 61; died, October 29, 1934, of cardiac disease.

- TAYLOR, GEORGE ASH, New York, N. Y.; class of 1890; aged 67; died, December 30, 1934, of cardiac disease. Dr. Taylor was born in Catonsville, Md. After graduating in medicine, he took postgraduate work in Berlin and Vienna. He had been a resident of New York for about 40 years where he specialized in the diseases of the ear and eye until 1914 when he had to retire on account of failing health.
- TILGHMAN, STANLEY JAMES, Easton, Md.; class of 1921; aged 37; was killed in an automobile accident, January 14, 1935.
- VOIGT, HERMAN ALBERT, Baltimore, Md.; class of 1927; aged 31; died, November 12, 1934, of bronchopneumonia.
- WEAGLEY, THEODORE HAMILTON, Marion, Pa.; P. & S., class of 1882; past president of the Franklin County Medical Society; aged 72; died, September 24, 1934, of angina pectoris.
- WEAVER, MILTON EDWARD, Perkasié, Pa.; P. & S., class of 1904; aged 53; died, November 14, 1934, of pernicious anemia and an injury of the hip received in an automobile accident.

ANNOUNCEMENT

UNIVERSITY OF MARYLAND, DIVISION OF MEDICAL EXTENSION

A COMBINED REVIEW COURSE FOR PHYSICIANS

June 3rd to 22nd, 1935

During three weeks of June, 1935, the Division of Medical Extension of the University of Maryland will offer its twelfth annual review course for physicians. This is a single, intensive general course. It is designed primarily to give to the physician in general practice the opportunity of studying those methods of diagnosis and of treatment which are in current use in the University Clinics. By careful use of the short period of time available a wide range of subjects is briefly presented. The greater part of the course is devoted to general medicine, but surgery and the various specialties are also included.

Information:

Questions concerning the course may be addressed to the Dean of the Medical School, University of Maryland, Baltimore.

Requirements for Admission:

The applicant must be a registered physician in good standing. Preference will be given to physicians registered in Maryland.

Enrollment:

The course will be limited to twenty men. It is suggested that applications be made promptly as the course will be filled up in the order that applications are received. Address: Dean of the Medical School, University of Maryland, Baltimore.

Fees and Tuition:

A matriculation fee of \$25.00 will be charged to all registrants from Maryland. For those coming from other States a charge of \$50.00 will be made.

Registration and Matriculation:

Monday, June 3rd, 1935, 8.30 A.M., northeast corner Lombard and Greene Streets, Baltimore.

Daily Schedule:

9.00–10.00—Lectures.

10.00–11.30—Ward Rounds.

11.30–12.30—Clinic.

12.30– 1.30—Lunch.

1.30– 2.30—Dispensary Clinic.

3.00– 4.30—Laboratory and Therapeutic Procedures, X-ray and Electrocardiography.

Lectures:

The morning lectures will deal with modern advances in diagnosis and treatment. The subjects will be chiefly from the field of general medicine and surgery with a few lectures devoted to the specialties.

Ward Rounds:

The class will be divided into groups for ward rounds and will visit the ward patients on the medical, surgical, and special services, in the University, Mercy and City Hospitals.

Clinics:

There will be a daily clinic in the Amphitheatre of the University Hospital. These clinics will be given by different departments.

Dispensary Clinics:

The class will be assigned in groups in rotation to the Dispensary Clinics for pediatrics, genito-urinary diseases, syphilis, and gastro-intestinal diseases.

Laboratory, Therapeutic Procedures, Roentgen Diagnosis, Electrocardiography:

In these afternoon periods instruction will be given in the laboratory methods of diagnosis. Modern functional tests such as those employed in diseases of the kidneys and of the liver will be demonstrated. The technique of, and the indications for the use of such procedures as transfusion, venesection, infusion, and spinal puncture will be taken up, and demonstrated when possible. There will be a number of periods devoted to X-ray diagnosis. Electrocardiography and the interpretation of electrocardiograms will be briefly presented.

SPRING ACTIVITIES

The Board of Regents, the President and the Board of Directors of the Alumni Association together with the Dean and Medical Council of the Medical School of the University of Maryland, cordially invite you to attend these activities.

PROGRAM

MAY 30TH, 1935

- 9:00 A.M.—12:00 Noon—Registration at the Medical Alumni Building—
519 West Lombard Street.
Surgical clinics in the University Hospital.
- 12:00 Noon—Complimentary Luncheon, First floor, University Hospital.
- 1:00 P.M.—Annual meeting of the Medical Alumni Association, 7th
Floor, University Hospital.
- 2:00 P.M.—Medical Clinic by Members of the Staff.
- 4:00—7:00 P.M.—Inspection of New Hospital.
- 7:00 P.M.—Annual Banquet, Lord Baltimore Hotel.

GUESTS OF HONOR

R. A. PEARSON

President of the University of Maryland

HIS EXCELLENCY, THE HONORABLE HARRY W. NICE

Governor of Maryland

THE HONORABLE HOWARD W. JACKSON

Mayor of Baltimore

GEORGE M. SHRIVER

Chairman Board of Regents, University of Maryland

THE HONORABLE WILLIAM P. COLE, JR.

Member of the House of Representatives

JOHN E. RAINE

Member Board of Regents

J. MILTON PATTERSON

Member Board of Regents

RANDOLPH WINSLOW, M.D., LL.D.

Emeritus Professor of Surgery, University of Maryland

GRADUATES OF 1935 SCHOOL OF MEDICINE, UNIVERSITY OF MARYLAND

SPEAKERS

HIS EXCELLENCY, THE HONORABLE HARRY W. NICE
Governor of Maryland

THE HONORABLE HOWARD W. JACKSON
Mayor of Baltimore

R. A. PEARSON
President of the University of Maryland

The following classes have expressed their intention to hold a reunion this year:

Class of 1930—Dr. Marius P. Johnson, 1416 Park Ave., Baltimore, Md.

Class of 1925—Dr. James G. Howell, 715 Frederick Ave., Catonsville, Md.

Class of 1920—Dr. D. J. Pessagno, Medical Arts Bldg., Baltimore, Md.

Class of 1915—U. of M.—Dr. Louis Diener, 23 Cylburne Ct. Apts., Baltimore, Md.

P. & S.—Dr. Thos. K. Galvin, 1129 N. Calvert St., Baltimore, Md.

Class of 1910—U. of M.—Dr. Erasmus H. Kloman, 44 W. Biddle Street, Baltimore, Md.

P. & S.—Dr. Chas. W. Maxson, 827 N. Charles Street, Baltimore, Md.

B. M. C.—Dr. H. R. Spencer, 3 Roland Ave., Baltimore, Md.

Class of 1905—U. of M.—Dr. Robert P. Bay, 1800 N. Charles St., Baltimore, Md.

P. & S.—Dr. Wm. C. Stifler, 1319 Light Street, Baltimore, Md.

B. M. C.—Dr. Herbert C. Blake, Medical Arts Building, Baltimore, Md.

Class of 1900—U. of M.—Dr. Irving J. Spear, 926 N. Charles St., Baltimore, Md.

P. & S.—Dr. Arthur G. Barrett, 2000 Eutaw Place, Baltimore, Md.

B. M. C.—Dr. J. K. B. E. Seegar, 325 Hawthorne Rd., Baltimore, Md.

JUNE 1ST, 1935

3:30 P.M. Commencement Exercises, Ritchie Colosseum, College Park, Maryland.

NOTE: The reunions will include the graduates from the College of Physicians and Surgeons, University of Maryland and the Baltimore Medical College. Any other classes desiring to hold a reunion will please get in touch with the Alumni office, 519 West Lombard Street, Baltimore, Maryland, and we shall be pleased to help in every possible way to make the affair a success.

Secretary of the Medical Alumni Association:

Kindly send ticket.. for the Alumni Banquet of the Medical Alumni Association, University of Maryland, to be held at the Lord Baltimore Hotel, on Thursday evening, May 30th, 1935 at 7 P.M.

will

I *or* be present for the Luncheon.

will not

Enclosed please find subscription at \$4.00 per ticket.

Name.....

Address.....

(Detach and mail to: MEDICAL ALUMNI ASSOCIATION,
519 West Lombard St., Baltimore, Md.)

Programs may be obtained at the time of registration.



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Ruth Lee Briscoe

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BULLETIN

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and College of Physicians and Surgeons

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Physicians and Surgeons*



Annual Announcement
Session 1935-36

VOLUME 19, NO. 5
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CALENDAR FOR 1935-36

SCHOOL OF MEDICINE

FIRST SEMESTER

1935		
September 24	Tuesday	*Registration for first- and second-year students.
September 25	Wednesday	*Registration for all other students.
September 26	Thursday	Instruction begins with the first scheduled period.
November 27	Wednesday	Thanksgiving recess begins after the last scheduled period.
December 2	Monday	Instruction resumed with the first scheduled period.
December 21	Saturday	Christmas recess begins after the last scheduled period.
1936		
January 6	Monday	Instruction resumed with the first scheduled period.
January 27	Monday	*Registration for the second semester.
to	to	
February 1, incl.	Saturday	
February 1	Saturday	First semester ends after the last scheduled period.

SECOND SEMESTER

February 3	Monday	Instruction begins with the first scheduled period.
February 22	Saturday	Washington's Birthday. Holiday.
April 8	Wednesday	Easter recess begins after the last scheduled period.
April 15	Wednesday	Instruction resumed with the first scheduled period.
June 6	Saturday	Commencement.

* A student who neglects or fails to register prior to or within the day or days specified for his or her school will be called upon to pay a fine of five dollars (\$5.00). The last day of registration with fine added to regular fees is Saturday at noon of the week in which instruction begins following the specified registration period. (This rule may be waived only upon the written recommendation of the dean.)

The offices of the registrar and comptroller are open daily, not including Saturday, from 9:00 a. m. to 5:00 p. m., and on Saturday from 9:00 a. m. to 12:30 p. m., with the following exceptions: Monday, September 16, 1935, until 8:00 p. m.; Saturday, September 28, 1935, until 5:00 p. m.; and on Saturday, February 1, 1936, until 5:00 p. m.

Advance registration is encouraged.

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JOHN F. LUTZ, M.D., Associate in Histology.
ISADORE A. SIEGEL, A.B., M.D., Associate in Obstetrics.
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WILLIAM R. GERAGHTY, B.S., M.D., Instructor in Neurological Surgery and Pathology and Assistant in Surgery.
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GEORGE H. YEAGER, B.S., M.D., Instructor in Surgery.
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MARTIN J. HANNA, M.D., Instructor in Histology.
ELIZABETH E. PAINTER, A. B., Instructor in Physiology.
MARIUS P. JOHNSON, A.B., M.D., Instructor in Physiology.
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EARL L. CHAMBERS, M.D., Instructor in Medicine.
Z. VANCE HOOPER, M.D., Instructor in Gastro-Enterology.
C. VICTOR RICHARDS, M.D., Instructor in Gastro-Enterology.
M. PAUL BYERLY, M.D., Instructor in Pediatrics and Assistant in Medicine.
JOHN F. HOGAN, M.D., Instructor in Genito-Urinary Surgery.
JOHN C. DUNBAR, M.D., Instructor in Pathology.
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ROBERT W. JOHNSON, M.D., Assistant in Pathology and Surgery.
A. V. BUCHNESS, M.D., Assistant in Surgery.
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A. SCAGNETTI, M.D., Assistant in Medicine.
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BIRCKHEAD MCGOWAN, M.D., Assistant in Diseases of the Nose and Throat and Otology.
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SIMON H. BRAGER, M.D., Assistant in Surgery.
C. W. PEAKE, M.D., Assistant in Surgery.
E. HOLLISTER DAVIS, A.B., M.D., Assistant in Anaesthesia.
JAMES C. OWINGS, M.D., Assistant in Surgery and Diseases of the Rectum and Colon.
JAMES G. ARNOLD, JR., A.B., M.D., Assistant in Pathology and Neurology.
KENNETH B. BOYD, M.D., Assistant in Obstetrics.
RALPH STEVENSON, A.B., M.D., Assistant in Pathology.
CONRAD B. ACTON, B.S., M.D., Assistant in Pathology.
R. B. MITCHELL, JR., M.D., Assistant in Medicine.
AARON C. SOLLID, M.D., Assistant in Gastro-Enterology.
ELI CONTRACT, M.D., Assistant in Gastro-Enterology.
WALTER A. ANDERSON, M.D., Assistant in Pediatrics.
ISRAEL P. MERANSKI, M.D., Assistant in Pediatrics.
H. D. FRANKLIN, M.D., Assistant in Pediatrics.
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ALBERT R. WILKERSON, M.D., Assistant in Surgery.
J. W. NELSON, M.D., Assistant in Surgery.
JULIUS GOODMAN, M.D., Assistant in Surgery.
I. RIDGEWAY TRIMBLE, M.D., Assistant in Surgery.
DUDLEY P. BOWE, M.D., Assistant in Obstetrics.
ARTHUR G. SIWINSKI, A.B., M.D., Assistant in Gross Anatomy.
DOROTHY E. SCHMALZER, B.S., Assistant in Biological Chemistry.
JOHN E. SAVAGE, B.S., M.D., Assistant in Pathology and Obstetrics.
SAMUEL LEGUM, A.B., M.D., Assistant in Medicine.
PHILIP D. FLYNN, M.D., Assistant in Medicine.
ALBERT J. SHOCHAT, M.D., Assistant in Gastro-Enterology.
L. R. SCHOOLMAN, M.D., Assistant in Gastro-Enterology.
ERNEST LEVI, M.D., Assistant in Gastro-Enterology.
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MELVIN B. DAVIS, B.S., M.D., Assistant in Anaesthesia.
JOSEPH C. BERNSTEIN, M.D., Assistant in Dermatology.
EDGAR G. SMITH, A.B., M.D., Assistant in Roentgenology.

HISTORY OF THE SCHOOL OF MEDICINE

The present School of Medicine, with the title of the University of Maryland School of Medicine and College of Physicians and Surgeons, is the result of a consolidation and merger of the University of Maryland School of Medicine with the Baltimore Medical College (1913) and the College of Physicians and Surgeons (1915).

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. It was organized in 1807, and chartered in 1808, under the name of the College of Medicine of Maryland, and its first class was graduated in 1810. In 1812 the College was empowered by the Legislature to annex three other colleges or faculties: Divinity, Law, and Arts and Sciences; and the four colleges thus united were "constituted an University by the name and under the title of the University of Maryland."

The beautiful college building at Lombard and Greene Streets, erected in 1812, is the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries and the first medical college library in the United States.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837) and here were first installed independent chairs for the teaching of Diseases of Women and Children (1867), and of Eye and Ear Diseases (1873).

The School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for the senior student was first established.

In 1913, juncture was brought about with the Baltimore Medical College, an institution of thirty-two years' growth. By this association the facilities of the School of Medicine were enlarged in faculty, equipment and hospital connection.

The College of Physicians and Surgeons was incorporated in 1872, and established on Hanover Street in a building afterward known as the *Maternile*, the first obstetrical hospital in Maryland. In 1878 union was effected with the Washington University School of Medicine, in existence since 1827, and the college was removed to Calvert and Saratoga Streets. By the consolidation with the College of Physicians and Surgeons, medical control of the teaching beds in the City Hospital, now the Mercy Hospital, was obtained.

ORGANIZATION OF THE SCHOOL OF MEDICINE

LABORATORY FACILITIES

The laboratories are located at two centers, the group of buildings at Greene and Lombard Streets, and at 32 and 34 South Paca Street. The schedule is so adjusted that the laboratory periods are placed with a view of obviating unnecessary movement on the part of the classes. The building known as Gray Laboratory, at Greene and Lombard Streets, houses three departments. The Anatomical Laboratory is placed upon the top floor, where skylights and an auxiliary modern system of electric lighting give adequate illumination of the subjects. The Department of Pharmacology occupies the second floor. There is a large room for the general student laboratory, which is thoroughly equipped with apparatus of recent acquisition, and in addition contains many instruments of unique and original design. With office and stockroom adjoining, this laboratory is complete for student experimentation. On the first floor of Gray Laboratory is the Department of Physiology. In addition to the large student laboratory, which is constructed for groups of fifty-eight students, there are rooms for the departmental office, preparation of material, and storage of apparatus. An additional room is devoted exclusively to mammalian experiments. In this building there is maintained an animal room in which is kept an abundance of material for experimental purposes. The embalming and storage plant for the Department of Anatomy is in physical connection with the building and its special departments. The laboratories of physiology and pharmacology are completely equipped with apparatus and lockers in accord with the best ideas of instruction. The students work in groups of two each, and each group has sufficient apparatus, so that the experimental work can be carried on without delay or recourse to a general stockroom.

The laboratories of Pathology, Bacteriology, Biochemistry and Clinical Pathology are located in the Medical laboratory building on Greene Street north of Lombard.

The Departments of Pathology, Bacteriology and Clinical Pathology use, conjointly, the large modernly equipped student laboratory on the second floor. The capacity is one hundred students. On the second floor there are also students' preparation rooms for the making and sterilization of media, cold storage and incubating rooms and research laboratories for the Departments of Bacteriology and Clinical Pathology.

On the main floor of this building are the offices, library, research and technical rooms of the Departments of Pathology and Bacteriology. The Department of Art also occupies quarters on this floor. The basement is given over to teaching museums, store rooms, students' locker room and lavatories.

The Department of Biological Chemistry is housed on the top floor of this building. The space allotted to teaching includes a large student laboratory equipped with one hundred and thirty-two commodious locker units. It is supplied with gas, hot and cold water, vacuum and direct current service, a special apparatus room, a warm room, a colorimeter room, a balance room, a first-aid room and a stockroom. These rooms have modern laboratory furniture and apparatus, a constant temperature and ventilating system, and are equipped and arranged for economic use of the students' time.

Adjoining the students' space are private offices and laboratories of the staff, a departmental library, a shop and a preparation room.

In the Main Building is the Museum of Anatomy, where are arranged for student reference, specimens which represent the careful selection of material over a period of many years. In the University Hospital is the Student Laboratory for analytical studies by those students who are serving as clinical clerks on the wards. A similar laboratory is maintained in the building at the northwest corner of Saratoga and Calvert Streets, for the student work of the Mercy Hospital.

At 32 and 34 South Paca Street are the Laboratories of Histology and Embryology. These laboratories accommodate the full class, and are equipped with necessary lockers for microscopes and apparatus. The department housed in this building is provided with individual offices, preparation and stockrooms.

CLINICAL FACILITIES

UNIVERSITY HOSPITAL

The University Hospital, which is the property of the University of Maryland, is the oldest institution for the care of the sick in the State of Maryland. It was opened in September, 1823, under the name of the Baltimore Infirmary, and at that time consisted of but four wards, one of which was reserved for eye patients.

In 1933-1934 the new University Hospital was erected, and patients were admitted to this building in November 1934. The new hospital is situated at the southwest corner of Redwood and Greene Streets, and is consequently opposite the Medical School buildings. The students, therefore, are in close proximity and little time is lost in passing from the lecture halls and laboratories to the clinical facilities of the new building.

The new hospital has a capacity of practically four hundred beds devoted to general medicine, surgery, obstetrics, pediatrics, and the various medical and surgical specialties. On the second, seventh and eighth floors are centered practically all the clinical and laboratory teaching facilities of the

institution. The north wing of the second floor is occupied by the entire Department of Roentgenology. The east wing with clinical pathology and special laboratories for clinical microscopy, bio-chemistry, bacteriology, and an especially well appointed laboratory for students' training. The south wing has its electro-cardiographic and basal metabolism departments, with new and very attractive air-conditioned or oxygen therapy cubicles. The west wing contains the Department of Rhinology and Bronchoscopy, Industrial Surgery, Ophthalmology, and Male and Female Cystoscopy.

The teaching zone extends from this floor to the eighth floor and comprises wards for surgery, medicine, obstetrics, pediatrics, and a large clinical lecture hall.

On the seventh floor is the general operating suite, the delivery suite, and the central supply station. The eighth floor is practically a students' floor and affords a mezzanine over the operating and delivery suites, and a students' entrance to the clinical lecture hall.

There are practically 270 beds available for teaching. In the basement there is a very well appointed Pathological Department with a large teaching autopsy room and its adjunct service of instruction of students in pathological anatomy.

Owing to its situation, adjacent to the largest manufacturing district of the city and the shipping district, a large number of accident patients are received.

The obstetrical service is particularly well arranged and provides accommodation for forty ward patients. This service, combined with an extensive home service, assures the student of abundant obstetrical training.

During the year ending December 31, 1934, 432 cases were delivered in the hospital and 1182 cases in the outdoor department. Students in the graduating class delivered or observed an average of fourteen cases, each student being required to deliver ten cases in the Outdoor Department or in allied hospitals.

The dispensaries associated with the University Hospital and the Mercy Hospital are organized upon a uniform plan in order that the teaching may be the same in each. Each dispensary has the following departments: Medicine, Surgery, Obstetrics, Pediatrics, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopaedics, Proctology, Dermatology, Throat and Nose, Tuberculosis and Psychiatry.

All students in their junior year work each day in the Departments of Medicine and Surgery of the dispensaries. In their senior year, all students work one hour each day in the special departments.

The new building, with its modern planning, makes a particularly attractive teaching hospital and is a very valuable addition to the clinical facilities of the Medical School.

The old hospital building is being remodeled and will be occupied by the Out-patient Department. Thus the students of the future will be provided with a splendidly appointed group of clinics for their training in out-patient work. All departments of clinical training will be represented in this remodeled building and all changes have been predicated on the teaching function for which this department is intended.

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MONTE EDWARDS, M.D.

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Dermatologist

HARRY M. ROBINSON, M.D.

Bronchoscopist

EDWARD A. LOOPER, M.D., D.Oph.

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LEO BRADY, M.D.

Oncologists

J. M. HUNDLEY, JR., M.A., M.D.

GRANT E. WARD, A.B., M.D.

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1935-1936

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MERRELL L. STOUT, A.B., M.D., *Assistant Resident in Obstetrics*

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OLIN CATES MOULTON, A.B., M.D., *Resident in Nose and Throat*

EDWARD W. HARRISON, M.D., *Resident in Roentgenology*

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JOHN RANDOLPH GODBEY, M.D.

JAMES PETTIGREW BUNN, JR., B.S., M.D.

JOHN CARL HAMRICK, B.S., M.D.

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PAUL SCHONFELD, M.D.

NORMAN JAMES WILSON, B.S., M.D.

Twelve months service

THURSTON RAY ADAMS, M.D.

WILLIAM LAWRENCE HOWARD, B.S., M.D.

GEORGE S. BOURNE, M.D.

CHARLES HENRY REIER, M.D.

DELMAS CAPLES, M.D.

EDWARD LEON ROBERSON, B.S., M.D.

ROBERT WILBUR FARR, B.S., M.D.

HARRY M. ROBINSON, JR., M.D.

IRVING FREEMAN, B.S., M.D.

ANDREW DU VAL TAYLOR, M.D.

CHARLES LUTHER GOODHAND, A.B., M.D.

JOHN McCULLEN WARREN, A.B., M.D.

LEWIS KLAIR WOODWARD, JR., A.B., M.D.

JOHN J. HOULIHAN, D.D.S. (Dental)

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J. HOWARD BURNS, *Assistant Chief of Clinic*

M. A. FINE, M.D.

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SAMUEL LILIENFELD, M.D.

JOSEPH LIPSKY, M.D.

GEORGE SILVERSTEIN, M.D.

LOUIS SCHOOLMAN, M.D.

ALBERT GLASS, M.D.

*Diseases of the Stomach and Intestines*SAMUEL MORRISON, *Chief of Clinic*

JOSEPH SINDLER, M.D.

M. S. KOPPELMAN, M.D.

Z. MORGAN, M.D.

Z. VANCE HOOPER, M.D.

C. VICTOR RICHARDS, M.D.

AARON C. SOLLOD, M.D.

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ALICE G. ROCKWELL, Ph.D.

HARRY M. MURDOCK, M.D.

*Diseases of the Lungs*E. H. TONOLLA, M.D., *Chief of Clinic*

ALBERT KERMISCH, M.D.

WALTER NIBLETT, M.D.

*Diseases of Metabolism*H. M. STEIN, M.D., *Chief of Clinic*

L. P. GUNDRY, M.D.

*Cardiovascular Diseases*WILLIAM S. LOVE, JR., M.D., *Chief of Clinic*

FRANK J. GERAGHTY, M.D.

CARL P. ROETLING, M.D.

SAMUEL J. HANKIN, M.D.

RICHARD FRANCE, M.D.

H. C. GRANT, M.D.

CONRAD ACTON, M.D.

*Allergy Clinic*H. M. BUBERT, M.D., *Chief of Clinic*

SAMUEL SNYDER, M.D.

L. R. SCHOOLMAN, M.D.

Pediatrics

C. LORING JOSLIN, M.D., *Director*
JOHN H. TRABAND, M.D., *Chief of Clinic*
CLEWELL HOWELL, M.D., *Chief of Clinic*

ALBERT JAFFE, M.D.
WILLIAM J. TODD, M.D.
F. STRATNER OREM, M.D.
WILLIAM G. GEYER, M.D.
R. M. HENING, M.D.
MARIE KOVNER, M.D.
SAMUEL S. GLICK, M.D.
A. H. FINKELSTEIN, M.D.
M. PAUL BYERLY, M.D.
HARRY A. RUTLEDGE, M.D.

SAMUEL T. HELMS, M.D.
ISRAEL P. MERANSKI, M.D.
WALTER A. ANDERSON, M.D.
H. D. FRANKLIN, M.D.
NELSA LEE WADE, M.D.
SAMUEL LILIENFELD, M.D.
H. W. SCHIFF, M.D.
O. WALTER SPURRIER, M.D.
J. EDMUND BRADLEY, M.D.
GUSTAV HIGHSTEIN, M.D.

S. C. FELDMAN, M.D.

Surgery

CHARLES REID EDWARDS, M.D., *Chief of Clinic*

THOMAS B. AYCOCK, M.D.
E. S. JOHNSON, M.D.
W. R. JOHNSON, M.D.
J. FRANK HEWITT, M.D.
JAS. C. OWINGS, M.D.

LUTHER E. LITTLE, M.D.
C. F. KARNS, M.D.
A. V. BUCHNESS, M.D.
W. N. McFAUL, JR., M.D.
GEO. H. YEAGER, M.D.

ALBERT R. WILKERSON, M.D.

Orthopaedic Surgery

ALLEN FISKE VOSHELL, A.B., M.D., *Chief of Clinic*

MOSES GELLMAN, B.S., M.D.
I. H. MASERITZ, M.D.

J. G. BENESUNES, M.D.
EGBERT L. MORTIMER, M.D.

JOHN B. HOPKINS, M.D.

Genito-Urinary

W. H. TOULSON, M.D., *Chief of Clinic*

SAMUEL T. HELMS, M.D.
LYLE J. MILLAN, M.D.

JOHN F. HOGAN, M.D.
W. A. C. COUNCILL, M.D.

Roentgenology

HENRY J. WALTON, M.D., *Chief of Clinic*
EUGENE L. FLIPPIN, M.D.

Dermatology

H. M. ROBINSON, M.D., *Chief of Clinic*

M. H. GOODMAN, M.D.

FRANCIS ELLIS, M.D.

A. C. MONNINGER, M.D.

Nose and Throat

FRANKLIN B. ANDERSON, M.D., *Chief of Clinic*

THOMAS R. O'ROURK, M.D.
JOSEPH NURKIN, M.D.

BIRKHEAD MCGOWAN, M.D.
BENJAMIN S. RICH, M.D.

*Colon and Rectum*MONTE EDWARDS, M.D., *Chief of Clinic**Gynecology*

J. M. HUNDLEY, JR., M.A., M.D.

JAMES J. MARSTON, M.D.

WILLIAM J. FULTON, M.D.

LEO BRADY, M.D.

JOHN T. HIBBITTS, M.D.

KENNETH BOYD, M.D.

JOSEPH V. CASTAGNA, M.D.

E. EUGENE COVINGTON, M.D.

THOMAS S. BOWYER, M.D.

*Oral Surgery*BRICE M. DORSEY, D.D.S., *Chief of Clinic*

HAROLD GOLDSTEIN, D.D.S.

WILLIAM E. HAHN, D.D.S.

SAMUEL H. BRYANT, D.D.S.

*Obstetrics*L. H. DOUGLASS, M.D., *Chief of Clinic*

J. G. M. REESE, M.D.

M. ALEXANDER NOVEY, A.B., M.D.

MAXWELL MAZER, M.D.

ISADORE A. SIEGEL, A.B., M.D.

MARGARET B. BALLARD, M.D.

S. K. WALLACE, M.D.

E. P. H. HARRISON, A.B., M.D.

KENNETH B. BOYD, M.D.

Oncology

J. M. HUNDLEY, JR., M.A., M.D.

J. W. NELSON, M.D.

GRANT E. WARD, A. B., M.D.

E. EUGENE COVINGTON, M.D.

THOMAS S. BOWYER, M.D.

ELDRED ROBERTS, M.D.

*Ophthalmology*HENRY F. GRAFF, A.B., M.D., *Chief of Clinic*

FRANK A. HOLDEN, M.D.

THOMAS O'ROURK, M.D.

JOHN G. RUNKLE, M.D.

FRANK A. PACIENZA, M.D.

*Otology*J. W. DOWNEY, M.D., *Chief of Clinic**Social Service*MISS GRACE PEARSON, *Directress*

UNIVERSITY HOSPITAL DISPENSARY

Report from October 1, 1933 to September 30, 1934

<i>Departments</i>	<i>New Cases</i>	<i>Old Cases</i>	<i>Total</i>
Pediatrics.....	2,904	17,194	20,098
Dermatology.....	8,209	9,176	17,385
Surgery.....	2,665	9,911	12,576
Orthopedics.....	1,488	9,160	10,648
Obstetrics.....	2,291	8,075	10,366
Medicine.....	1,595	4,700	6,295

<i>Departments</i>	<i>New Cases</i>	<i>Old Cases</i>	<i>Total</i>
Eye.....	1,439	3,744	5,183
Gynecology.....	1,511	3,539	5,050
Allergy.....	102	4,871	4,973
Genito-Urinary.....	491	3,247	3,738
Nose and Throat.....	1,019	1,437	2,456
Dental.....	1,100	1,144	2,244
Gastro-Intestinal.....	420	2,021	2,441
Oncology.....	220	1,851	2,071
Cardiology.....	317	1,383	1,700
Tuberculosis.....	325	1,099	1,424
Neurology.....	224	1,011	1,235
Proctology.....	163	584	747
Ear.....	224	404	628
Cystoscopy.....	91	340	431
Total.....	26,798	84,891	111,689

MERCY HOSPITAL

The Sisters of Mercy first assumed charge of the Hospital at the corner of Calvert and Saratoga Streets, then owned by the Washington University, in 1874. By the merger of 1878 the Hospital came under the control of the College of Physicians and Surgeons, but the Sisters continued their work of administering to the patients.

In a very few years it became apparent that the City Hospital, as it was then called, was much too small to accommodate the rapidly growing demands upon it. However, it was not until 1888 that the Sisters of Mercy, with the assistance of the Faculty of the College of Physicians and Surgeons, were able to lay the cornerstone of the present Hospital. This building was completed and occupied late in 1889. Since then the growing demands for more space have compelled the erection of additions, until now there are accommodations for 275 patients.

In 1909 the name was changed from The Baltimore City Hospital to Mercy Hospital.

The clinical material in the free wards is under the exclusive control of the Faculty of the University of Maryland School of Medicine and College of Physicians and Surgeons.

The Hospital adjoins the College building, and all surgical patients from the public wards are operated upon in the College operating rooms. This union of the Hospital and College buildings greatly facilitates the clinical teaching.

Mercy Hospital is the hospital of the United Railways and Electric Company of Baltimore City, and receives patients from the Baltimore and Ohio Railroad Company and from the Pennsylvania Railroad Company and its branches.

MERCY HOSPITAL STAFF

BOARD OF GOVERNORS

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WALTER D. WISE, M.D.

SISTER M. HELEN

WAITMAN F. ZINN, M.D.

SISTER M. HILDEGARDE

THOMAS K. GALVIN, M.D.

SISTER M. VINCENT

MAURICE C. PINCOFFS, M.D.

SISTER M. CORNELIA

HOSPITAL STAFF

SURGICAL DIVISION

Consulting Surgeon

ALEXIUS McGLANNAN, A.M., M.D., LL.D.

Surgeons

WALTER D. WISE, M.D.

CHARLES F. BLAKE, M.D.

ELLIOTT H. HUTCHINS, M.D.

F. L. JENNINGS, M.D.

D. J. PESSAGNO, M.D.

R. W. LOCHER, M.D.

A. M. EVANS, M.D.

THOMAS R. CHAMBERS, M.D.

WILLIAM F. RIENHOFF, M.D.

N. CLYDE MARVEL, M.D.

Associate Surgeons

I. O. RIDGELY, M.D.

H. F. BONGARDT, M.D.

J. W. NELSON, M.D.

THOMAS B. AYCOCK, M.D.

H. B. McELWAIN, M.D.

CHARLES W. MAXSON, M.D.

JULIUS LEYKO, M.D.

Assistant Surgeons

JOHN A. O'CONNOR, M.D.

SIMON BRAGER, M.D.

JULIUS GOODMAN, M.D.

T. J. TOUHEY, M.D.

E. E. COVINGTON, M.D.

I. R. TRIMBLE, M.D.

S. DEMARCO, JR., M.D.

R. T. SHACKELFORD, M.D.

Ophthalmologists and Otologists

HARRY FRIEDENWALD, A.B., M.D.

H. K. FLECK, M.D.

J. W. DOWNEY, M.D.

Associates

J. I. KEMLER, M.D.

F. A. PACIENZA, M.D.

Consulting Rhinologists and Laryngologists

RAYMOND McKENZIE, M.D.

GEORGE W. MITCHELL, M.D.

Rhinologists and Laryngologists

WAITMAN F. ZINN, M.D.

Associates

F. A. PACIENZA, M.D.

BIRCKHEAD MCGOWAN, M.D.

F. A. KAYSER, M.D.

BENJAMIN S. RICH, M.D.

Bronchoscopist

WAITMAN F. ZINN, M.D.

Associate

F. A. KAYSER, M.D.

Proctologist

CHARLES F. BLAKE, M.D.

Assistant

E. E. COVINGTON, M.D.

Orthopaedic Surgeon

ALBERTUS COTTON, M.D.

Associate

H. L. ROGERS, M.D.

Urologist

ALEXANDER J. GILLIS, M.D.

Associates

KENNETH D. LEGGE, M.D.

LEON K. FARGO, M.D.

Dentist

N. D. FUSCO, D.D.S.

Assistant

J. J. FOLEY, D.D.S.

MEDICAL DIVISION

Physicians

MAURICE C. PINCOFFS, B.S., M.D.

C. B. GAMBLE, M.D.

HARVEY G. BECK, M.D.

C. C. W. JUDD, M.D.

H. K. PETERS, M.D.

GEORGE McLEAN, M.D.

Associates

HUBERT C. KNAPP, M.D.
BARTUS T. BAGGOTT, M.D.
J. S. EASTLAND, M.D.

WETHERBEE FORT, M.D.
L. A. M. KRAUSE, M.D.
JOHN E. LEGGE, M.D.

NELSON P. CAREY, M.D.

Assistants

S. A. TUMMINELLO, M.D.
HOWARD BURNS, M.D.

EARL CHAMBERS, M.D.
K. W. GOLLEY, M.D.

J. M. MILLER, M.D.

Gastro-Enterologist

JULIUS FRIEDENWALD, A.M., M.D.

Associates

T. FREDERICK LEITZ, M.D.

THEODORE MORRISON, M.D.

Assistants

MAURICE FELDMAN, M.D.

JOSEPH SINDLER, M.D.

Pediatricians

EDGAR B. FRIEDENWALD, M.D.

Associates

F. B. SMITH, M.D.

THOMAS J. COONAN, M.D.

Assistants

W. J. SCHMITZ, M.D.

G. B. MANSDORFER, M.D.

Neurologist and Psychiatrist

ANDREW C. GILLIS, M.D.

Associate

MILFORD LEVY, M.D.

OBSTETRICAL DIVISION

E. P. SMITH, M.D.

ABRAM S. SAMUELS, M.D.
GEORGE A. STRAUSS, M.D.
ERNEST EDLAVITCH, M.D.

WILLIAM S. GARDNER, M.D.
THOMAS K. GALVIN, M.D.
JOHN J. ERWIN, M.D.

Associate Obstetricians

FRANK K. MORRIS, M.D.

FRANCIS W. GILLIS, M.D.

GYNECOLOGICAL DIVISION

Gynecologists

WILLIAM S. GARDNER, M.D.

THOMAS J. GALVIN, M.D.

ABRAM SAMUELS, M.D.

GEORGE A. STRAUSS, M.D.

E. P. SMITH, M.D.

Associate

J. J. ERWIN, M.D.

Assistants

E. S. EDLAVITCH, M.D.

FRANK K. MORRIS, M.D.

PATHOLOGICAL DIVISION

WALTER C. MERKEL, M.D.

HUGH R. SPENCER, M.D.

Clinical Pathologists

H. T. COLLEMBERG, M.D.

H. R. PETERS, M.D.

CHARLES E. BRAMBLE, Ph.D.

Technicians

SISTER MARY JOAN

SISTER MARY CELESTE

SISTER MARY CLAUDE

FRANCES DONOVAN

ELEANOR BEHR

X-RAY DEPARTMENT

Radiographer

ALBERTUS COTTON, M.D.

Associate

HARRY L. ROGERS, M.D.

Assistant

WILLIAM GREENFELD, M.D.

Technicians

SISTER M. KEVIN

ELIZABETH CROOK

MERCY HOSPITAL RESIDENT STAFF

Chief Resident

MEYER H. ZURAVIN, M.D.

Resident Surgeons

DANIEL R. ROBINSON, M.D.

C. F. DAVIS, M.D.

JOSEPH V. JERARDI, M.D.

JASON GASKEL, M.D.

Resident Physician

PHILIP D. FLYNN, M.D.

Assistant

GRAFTON HERSPERGER, M.D.

Resident Gynecologist

BRIEN HAIGLEY, M.D.

Resident Rhinologist and Laryngologist

THEODORE A. SCHWARTZ, M.D.

*Resident Pathologist**Rotating Internes*

FRANK H. CUTLER, JR., M.D.

FREDERICK E. KNOWLES, JR., M.D.

WILLIAM C. DUNNIGAN, M.D.

CALEB R. LAYTON, M.D.

WILLIAM HOWARD GRENZER, M.D.

LAWRENCE H. MILLS, M.D.

HARRY FRANCIS KANE, M.D.

WILLIAM J. TOBIN, M.D.

JULIUS M. WAGHELSTEIN, M.D.

DISPENSARY STAFF

*Surgeons**Supervisor*, JULIUS J. LEYKO, M.D.

I. O. RIDGELY, M.D.

T. J. TOUHEY, M.D.

JOHN O'CONNOR, M.D.

J. W. NELSON, M.D.

H. F. BONGARDT, M.D.

SIMON BRAGER, M.D.

I. R. TRIMBLE, M.D.

JULIUS GOODMAN, M.D.

S. DEMARCO, M.D.

E. E. COVINGTON, M.D.

RICHARD T. SHACKELFORD, M.D.

Genito-Urinary

A. J. GILLIS, M.D.

K. D. LEGGE, M.D.

Orthopaedists

ALBERTUS COTTON, M.D.

HARRY L. ROGERS, M.D.

I. H. MASERITZ, M.D.

*Physicians**Supervisor*, MAURICE C. PINCOFFS, B.S., M.D.

HENRY SHEPPARD, M.D.

EARL L. CHAMBERS, M.D.

} *Chiefs of Clinic*

J. M. MILLER, M.D.

S. SNYDER, M.D.

S. A. TUMMINELLO, M.D.

*Cardiovascular Diseases*T. C. WOLFE, M.D., *Chief of Clinic**Diseases of the Lung*S. SNYDER, M.D., *Chief of Clinic*

Diseases of Metabolism

J. S. EASTLAND, M.D., *Chief of Clinic*

Allergic Diseases

H. M. BUBERT, M.D., *Chief of Clinic*
S. SNYDER, M.D.

Diseases of the Stomach

Supervisor, JULIUS FRIEDENWALD, M.D.

T. FREDERICK LEITZ, M.D.
M. FELDMAN, M.D.

THEODORE H. MORRISON, M.D.
JOSEPH SINDLER, M.D.

H. WILLIAM PRIMAKOFF, M.D.

Esophagoscopist

WAITMAN F. ZINN, M.D.

Nervous Diseases

Supervisor, A. C. GILLIS, M.D.

MILFORD LEVY, M.D.

MIRIAM F. DUNN, M.D.

Pediatricians

Supervisor, EDGAR B. FRIEDENWALD, M.D.
W. J. SCHMITZ, M.D.

Gynecologists

W. S. GARDNER, M.D.
A. SAMUELS, M.D.

GEORGE A. STRAUSS, M.D.
J. J. ERWIN, M.D.

E. EDLAVITCH, M.D.
F. W. GILLIS, M.D.

F. K. MORRIS, M.D.

Diseases of Nose and Throat

WAITMAN F. ZINN, M.D.

BENJAMIN S. RICH, M.D.
B. MCGOWAN, M.D.

R. F. MCKENZIE, M.D.
HORACE STRICKLAND, M.D.

Diseases of Eye and Ear

H. F. ELECK, M.D.
J. I. KEMLER, MD.

M. RASKIN, M.D.
F. A. PACIENZA, M.D.

Dermatologist

LLEWELLYN LORD, M.D.

Social Service Department

SISTER MARY BEATRICE

KATHERINE CRAYCROFT

MERCY HOSPITAL DISPENSARY REPORT

(Year 1934)

<i>Department</i>	<i>Old</i>	<i>New</i>	<i>Total</i>
Surgery.....	5,041	1,368	6,409
Medicine.....	2,991	1,064	4,055
Cardiac.....	279	49	328
Diabetic.....	313	7	320
Gynecology.....	992	405	1,397
Eye and Ear.....	459	280	739
Nose and Throat.....	464	551	1,015
Neurology.....	919	141	1,060
Pediatrics.....	362	253	615
Gastro-Intestinal.....	403	81	484
Dental.....	212	246	458
Rectal.....	202	67	269
Orthopedics.....	1,278	368	1,646
Skin.....	680	363	1,043
Genito-Urinary.....	2,975	424	3,399
Total.....	17,570	5,667	23,237

OTHER CLINICAL FACILITIES

THE BALTIMORE CITY HOSPITALS

The clinical advantages of the University have been largely increased by the liberal decision of the Department of Public Welfare to allow the immense material of these hospitals to be used for the purpose of medical education. There are daily visits and clinics in medicine and surgery by the Staff of the Hospitals. The autopsy material is unsurpassed in this country in amount, thoroughness of study, and the use made of it in medical teaching.

The Baltimore City Hospital consists of the following separate divisions:

The General Hospital, 400 beds.

The Hospital for Chronic Cases, 508 beds.

The Hospital for Tuberculosis, 172 beds.

The Psychopathic Hospital, 320 beds.

Infirmary (Home for Aged) 1053 beds.

STAFF OF BALTIMORE CITY HOSPITALS

PARKER J. McMILLIN, *Superintendent*

VISITING STAFF

Physician-in-Chief.....THOMAS R. BOGGS, S.B., M.D.
Surgeon-in-Chief.....ARTHUR M. SHIPLEY, Sc.D., M.D.
Physician-in-Chief, Tuberculosis Hospital.....HARRY M. STEIN, M.D.

<i>Physician-in-Chief, Psychopathic Hospital</i>	HARRY GOLDSMITH, M.D.
<i>Obstetrician-in-Chief</i>	LOUIS H. DOUGLASS, M.D.
<i>Pediatrician-in-Chief</i>	T. CAMPBELL GOODWIN, M.D.
<i>Visiting Pathologist</i>	S. S. BLACKMAN, A.B., M.D.
<i>Resident Pathologist</i>	RALPH STEVENSON, M.D.

ASSISTANT VISITING STAFF

	{ T. BAYRON AYCOCK, M.D.
	{ FRANK S. LYNN, M.D.
	{ C. A. REIFSCHNEIDER, M.D.
	{ GRANT WARD, M.D.
<i>Assistant Visiting Surgeons</i>	{ LUTHER E. LITTLE, M.D.
	{ E. M. HANRAHAN, M.D.
	{ GEORGE G. FINNEY, M.D.
	{ I. RIDGEWAY TRIMBLE, M.D.
	{ JAMES C. OWINGS, M.D.
	{ J. G. M. REESE, M.D.
	{ I. A. SIEGEL, M.D.
	{ MARGARET BALLARD, M.D.
<i>Assistant Visiting Obstetricians</i>	{ KENNETH B. BOYD, M.D.
	{ JOHN M. HAWS, M.D.
	{ ALAN F. GUTTMACHER, M.D.
	{ WATSON W. GRAY, M.D.
	{ BESSIE MOSES, M.D.
	{ EARLE P. CLEMSON, M.D.

CONSULTING STAFF

<i>Gynecology</i>	{ RAYMOND G. WILLSE, M.D.
	{ J. MASON HUNDLEY, JR., M.D.
	{ JOHN T. HIBBITTS, M.D.
<i>Orthopedics</i>	{ ALLEN F. VOSHELL, M.D.
	{ H. ALVAN JONES, M.D.
<i>Roentgenology</i>	{ JOHN W. PIERSON, M.D.
<i>Psychiatry</i>	{ ESTHER L. RICHARDS, M.D.
<i>Pediatrics</i>	{ LAWSON WILKINS, M.D.
<i>Ophthalmology</i>	{ CECIL BAGLEY, M.D.
<i>Otology</i>	{ LEROY M. POLVOGT, M.D.
	{ CHARLES BAGLEY, M.D.
<i>Neurology</i>	{ RICHARD G. COBLENTZ, M.D.
	{ F. S. WOLFE, M.D.
	{ O. R. LANGWORTHY, M.D.
	{ EDWARD A. LOOPER, M.D.
<i>Laryngology</i>	{ FRANK B. ANDERSON, M.D.
	{ HARRY R. SLACK, M.D.
	{ WAITMAN F. ZINN, M.D.
<i>Urology</i>	{ W. HOUSTON TOULSON, M.D.
	{ MONTE EDWARDS, M.D.
<i>Proctology</i>	{ LEWIS ROSENTHAL, M.D.
<i>Dental</i>	{ IRVIN GOLDBORO, D.D.S.
<i>Dermatology</i>	{ ISAAC R. PELS, M.D.
<i>Tuberculosis</i>	{ LAWRENCE M. SERRA, M.D.

THE JAMES LAWRENCE KERNAN HOSPITAL AND INDUSTRIAL SCHOOL OF
MARYLAND FOR CRIPPLED CHILDREN

This institution is situated on an estate of 75 acres at Hillsdale. The site is just within the northwestern city limits and of easy access from the city proper.

The location is ideal for the treatment of children, in that it affords all the advantages of sunshine and country air.

A complete hospital unit, new in every respect, offers all modern facilities for the care of any orthopaedic condition in children.

The hospital is equipped with 82 beds—endowed, and city and state supported.

The Children's Orthopaedic Dispensary at the University Hospital is maintained in closest affiliation and cares for the cases discharged from the Kernan Hospital. The physiotherapy department is very well equipped with modern apparatus and trained personnel.

STAFF

<i>Surgeon-in-Chief and Medical Director</i>	ALLEN FISKE VOSHELL, A.B., M.D.
<i>Attending Orthopaedic Surgeon</i>	ALBERTUS COTTON, A.M., M.D.
<i>Associate Orthopaedic Surgeons</i>	{ MOSES GELLMAN, B.S., M.D. HARRY L. ROGERS, M.D.
<i>Resident Orthopaedic Surgeon</i>	E. M. KARP, B.S., M.D.
<i>Consulting Surgeons</i> {	J. M. T. FINNEY, A.B., M.D., D.S.M., F.R.C.S., (Eng., Ire.) Hon. ARTHUR M. SHIPLEY, Sc.D., M.D.
<i>Consulting Plastic Surgeon</i>	JOHN STAIGE DAVIS, B.Sc., M.D.
<i>Consulting Neurological Surgeon</i>	CHARLES BAGLEY, JR., A.B., M.D.
<i>Consulting Oculist</i>	HARRY FRIEDENWALD, M.D.
<i>Oculist</i>	F. A. PACIENZA, M.D.
<i>Consulting Aurist and Laryngologist</i>	EDWARD A. LOOPER, M.D.
<i>Aurist and Laryngologist</i>	F. B. ANDERSON, M.D.
<i>Consulting Dentist</i>	HARRY B. MCCARTHY, D.D.S.
<i>Dentist</i>	M. E. COBERTH, D.D.S.
<i>Consulting Physicians</i>	{ THOMAS B. FUTCHER, A.B., M.D. THOMAS R. BROWN, A.B., M.D. LEWELLYS F. BARKER, A.B., M.D.
<i>Pediatricist</i>	BENJAMIN TAPPAN, A.B., M.D.
<i>Dermatologists</i>	{ HARRY M. ROBINSON, M.D. LEON GINSBERG, M.D.
<i>Consulting Pathologists</i>	{ SYDNEY M. CONE, A.B., M.D. HUGH R. SPENCER, M.D.
<i>Consulting Neurologist</i>	IRVING J. SPEAR, M.D.
<i>Neurologist</i>	R. V. SELIGER, M.D.
<i>Anesthetists</i>	{ J. A. TOMPKINS, M.D. J. D. HOLLY, M.D.
<i>Roentgenologist</i>	ALBERTUS COTTON, A.M., M.D.

<i>Superintendent</i>	MISS C. GERTRUDE FORRESTER, R.N.
<i>Dispensary and Social Service Nurse</i>	MISS MABEL S. BROWN, R.N.
<i>Physiotherapist and X-Ray Technician</i>	MRS. GEORGINA WISONG
<i>Instructor in Grammar School</i>	MISS LAURA HAMPSON

LIBRARIES

The University Library, founded in 1813 by the purchase of the collection of Dr. John Crawford, now contains 15,443 volumes, a file of 188 current medical journals, and several thousand pamphlets and reprints. It is well stocked with recent literature, including books and periodicals of general interest. The home of the library is Davidge Hall, a comfortable and commodious building in close proximity to the classrooms and the laboratories of the Medical Department. The library is open daily during the year for use of members of the faculty, the students, and the profession generally.

The Library of the Medical and Chirurgical Faculty of Maryland, containing 50,000 volumes, is open to the students of the school. The leading medical publications of the world are received by the library, and complete sets of many journals are available. Other libraries of Baltimore are the Peabody (250,000 volumes) and the Enoch Pratt Free Library (709,129 volumes).

All these libraries are open to the students of the school without charge.

ORGANIZATION OF THE CURRICULUM

The following curriculum is the result of a thorough revision of teaching in this school in order to meet modern requirements. The multiplication of specialties in medicine and surgery necessitates a very crowded course and the introduction of electives will very soon be depended on to solve some of the difficulties.

The curriculum is organized under eleven departments.

1. Anatomy (including Histology and Embryology).
2. Physiology.
3. Bacteriology and Immunology.
4. Biological Chemistry.
5. Pharmacology and Materia Medica.
6. Pathology.
7. Medicine (including Medical Specialties).
8. Surgery (including Surgical Specialties).
9. Obstetrics.
10. Gynecology.
11. Ophthalmology.

The instruction is given in four years of graded work.

Several courses of study extend through two years or more, but in no case are the students of different years thrown together in the same course of teaching.

The first and second years are devoted largely to the study of the structures and functions of the normal body. Laboratory work occupies most of the student's time during these two years.

Some introductory instruction in Medicine and Surgery is given in the second year. The third and fourth years are almost entirely clinical.

A special feature of instruction in the school is the attempt to bring together teacher and student in close personal relationship. In many courses of instruction the classes are divided into small groups and a large number of instructors insures attention to the needs of each student.

In most courses the final examination as the sole test of proficiency has disappeared and the student's final grade is determined largely by partial examinations, recitations and assigned work carried on throughout the course.

DEPARTMENT OF ANATOMY, INCLUDING GROSS ANATOMY, HISTOLOGY AND EMBRYOLOGY

CARL L. DAVIS, M.D.....	Professor of Anatomy
EDUARD UHLENHUTH, Ph.D.....	Professor of Anatomy
FRANK H. FIGGE, A.B., Ph.D.....	Assistant Professor of Gross Anatomy
THOMAS B. AYCOCK, B.S., M.D.....	Assistant Professor of Gross Anatomy
JOHN F. LUTZ, M.D.....	Associate in Histology
MONTE EDWARDS, M.D.....	Associate in Gross Anatomy
JOSEPH POKORNY, M.D.....	Instructor in Histology
JAROSLAV HULLA, B.S., M.D.....	Instructor in Histology
FRANK K. MORRIS, A.B., M.D.....	Instructor in Gross Anatomy
MARTIN J. HANNA, M.D.....	Instructor in Histology
ARTHUR G. SIWINSKI, A.B., M.D.....	Assistant in Gross Anatomy
HARRY A. TEITELBAUM, B.S., M.D.....	Weaver Fellow in Gross Anatomy
JAMES U. THOMPSON, A.B.....	Weaver Fellow in Gross Anatomy

GROSS ANATOMY. *First Year.* Total number of hours 534. During the first semester, 5 lecture periods and 26 laboratory hours per week.

The entire course centers around the dissection of the human body. Each student is given opportunity to dissect an entire half (left or right) of the body. The dissection is supplemented by lectures and informal discussions.

Anatomy is taught as an independent science, emphasis being laid on the human species as contrasted with animal morphology. An attempt is

made to familiarize the student with the elements of anthropometry, with systematic and regional anatomy, with the principles of topographical anatomy and with osteology.

The actual dissection is preceded by a general examination of the body surface and superficial organs. Opportunity is provided for taking representative measurements of the head, face, trunk and limbs, and of acquiring a knowledge of the use of anthropometric instruments. Throughout the dissection the student is encouraged to take measurements and weights of all the major organs, including the brain and the endocrines, and to obtain a knowledge of the proportions of each organ to the body as a whole, as well as to the variability of these proportions.

The dissection is undertaken in relation to topographical regions of the body, but systematic relations are continuously emphasized and, wherever possible, brought out by actual dissection.

Osteology is taught in conjunction with the dissection of the muscles and the study of the functional mechanism of the skeleto-muscular apparatus. The students are provided with skeletal bones, as far as our facilities permit.

Second, Third and Fourth Years. Opportunity is provided for advanced special dissections and for research work in every branch of anatomy. Dr. Uhlenhuth.

HISTOLOGY AND EMBRYOLOGY

First Year. This course has three subdivisions: First, general histology; second, organology; and third, the central nervous system, the last being distinguished as neuro-anatomy. The course in histology is divided equally between the study of the fundamental tissues and that of organs. Neuro-anatomy is taught during the first semester of the second year. Throughout the entire course the embryology of the part being studied precedes the study of the fully developed tissue. Thus embryology becomes a correlated part of the whole subject of microscopic anatomy and not an independent subject.

A brief course in histological technic precedes the study of histological tissues, thus familiarizing the student with the principles involved in the preparation of material for microscopic study. For the remainder of the course, students are furnished slides of the required tissues, previously prepared in our own laboratory, thus insuring a uniform and satisfactory quality of material for study and permitting the time of the student to be expended in the study of material rather than in the technic of its preparation.

Neuro-anatomy embraces a study of the fundamental structure of the central nervous system as applied to its function. An abundance of

material permits of individual dissection of the human brain. A series of appropriately stained sections of the human brain stem is furnished each student for the microscopic study of the internal structure of the nervous system. Dr. Davis, Dr. Lutz.

Total assigned hours, Microscopic Anatomy, 192.

For a description of the graduate courses offered by the members of the staff, consult the catalog of the Graduate School.

DEPARTMENT OF PHYSIOLOGY

.....	Professor of Physiology
O. G. HARNE, A.B.	
Associate Professor of Physiology, and Acting Head of the Department	
ELIZABETH PAINTER, A.B.....	Instructor in Physiology
MARIUS P. JOHNSON, A.B., M.D.....	Instructor in Physiology

First Year. Lectures and conferences are given on the physiology of blood, gastro-intestinal tract, including secretion and absorption, liver and pancreas, methods employed to determine metabolism and the endocrine system. The laboratory work on these subjects is performed during the second year.

Lectures and conferences..... 26 hours

Second Year. The course in physiology is designed to acquaint the student first with the fundamental principles of systemic and organic function. From this point the physiology of the organ or system is studied per se, and in relation to other organs and the body as a whole.

This is accomplished by first lecturing, then performing laboratory experiments or demonstrations dealing with the phenomenon, and lastly conferences and summaries.

Lectures.....	32 hours
Conferences.....	32 hours
Laboratory.....	<u>120 hours</u>
Total.....	184 hours

For a description of the graduate courses offered by the members of the staff, consult the catalog of the Graduate School.

DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY

FRANK W. HACHTEL, M.D.....	Professor of Bacteriology
J. A. F. PFEIFFER, M.D.....	Instructor in Bacteriology
HENRY F. BUETTNER, M.D.....	Instructor in Bacteriology
H. EDMUND LEVIN, M.D.....	Assistant in Bacteriology
H. M. BUBERT, M.D.....	Assistant in Bacteriology

Instruction in bacteriology is given in the laboratory to the students of the second year during the first semester. This includes the methods of preparation and sterilization of culture media, the study of pathogenic bacteria, and the bacteriological examination of water and milk. The bacteriological diagnosis of the communicable diseases is also included in this course. Animal inoculations are made in connection with the bacteria studied. The most important protozoa are also studied in the laboratory. The principles of general bacteriology are taught by quiz, conference and lecture.

The principles of immunology are presented by means of quizzes, conferences and lectures to the second-year class throughout the second semester, and practical experiments are carried out by the class in laboratory sessions.

	<i>Bacteriology</i>	<i>Immunology</i>
Lectures and recitations.....	16 hours	} 72 hours
Laboratory.....	104 hours	
Total.....	120 hours	72 hours

DEPARTMENT OF BIOLOGICAL CHEMISTRY

H. BOYD WYLIE, M.D.....	Professor of Biological Chemistry
EMIL G. SCHMIDT, Ph.D.....	Assistant Professor of Biological Chemistry
FRANK N. OGDEN, M.D.....	Associate in Biological Chemistry
DOROTHY E. SCHMALZER, B.S.....	Assistant in Biological Chemistry
MAURICE J. SCHMULOVITZ, A.B.....	Weaver Fellow in Biological Chemistry

This course is designed to present the fundamental concepts of biological chemistry. The phenomena of living matter, and its principal ingredients, secretions and excretions are discussed in lectures and conferences and examined experimentally. Training is afforded in routine biochemical methods of investigation.

Lectures.....	66 hours
Conferences.....	26 hours
Laboratory.....	88 hours
Total.....	180 hours

For a description of the graduate courses offered by the members of the staff, consult the catalog of the Graduate School.

DEPARTMENT OF PHARMACOLOGY

JOHN C. KRANTZ, JR., Ph.D.....	Professor of Pharmacology
RUTH MUSSER, A.B., M.S.....	Instructor in Pharmacology
WILLIAM ELLSWORTH EVANS, M.S.....	Instructor in Pharmacology
WILLIAM GLENN HARNE.....	Demonstrator in Pharmacology
C. JELLEFF CARR, B.S., M.S.....	Isaac E. Emerson Fellow in Pharmacology

This course is designed to include those phases of pharmacology necessary for an intelligent use of drugs in the treatment of disease. The didactic instruction includes materia medica, pharmacy, prescription-writing, toxicology, posology, pharmaco-dynamics, and experimental therapeutics. The laboratory exercises parallel the course of lectures.

In addition, optional conference periods and lectures are available for students desiring further instruction or advice.

Lectures.....	64 hours
Laboratory.....	96 hours
Total.....	160 hours

For a description of the graduate courses offered by the members of the staff, consult the catalog of the Graduate School.

DEPARTMENT OF PATHOLOGY

HUGH R. SPENCER, M.D.....	Professor of Pathology
SYDNEY M. CONE, A.B., M.D.....	Associate Professor of Pathology
ROBERT B. WRIGHT, B.S., M.D.....	Assistant Professor of Pathology
C. GARDNER WARNER, A.B., M.D.....	Assistant Professor of Pathology
ALBERT E. GOLDSTEIN, M.D.....	Associate in Pathology
WALTER C. MERKEL, A.B., M.D.....	Associate in Pathology
M. ALEXANDER NOVEY, A.B., M.D.....	Instructor in Pathology
WM. S. LOVE, JR., A.B., M.D.....	Instructor in Pathology
LEON FREEDOM, M.D.....	Instructor in Pathology
WILLIAM R. GERAGHTY, B.S., M.D.....	Instructor in Pathology
BENJAMIN ABESHOUSE, Ph.B., M.D.....	Instructor in Pathology
JOHN C. DUNBAR, M.D.....	Instructor in Pathology
W. R. JOHNSON, M.D.....	Instructor in Pathology
JAMES G. ARNOLD, A.B., M.D.....	Assistant in Pathology
CONRAD B. ACTON, B.S., M.D.....	Assistant in Pathology
JOHN E. SAVAGE, B.S., M.D.....	Assistant in Pathology
ROBERT W. JOHNSON, M.D.....	Assistant in Pathology
RALPH STEVENSON, A.B., M.D.....	Assistant in Pathology

Courses of instruction in pathology are given during the second and third years. These courses are based on previous study of normal structure and function and aim to outline the natural history of disease. Instruction is made as practical as possible so that the student may become familiar with the appearance of tissues in disease and may be able to correlate anatomical lesions with clinical symptoms and signs.

1. GENERAL PATHOLOGY. (*Second Year.*) This course includes the study and demonstration of disturbances of the body fluids, disturbances of structure, nutrition and metabolism of cells, disturbances of fat, carbohydrate and protein metabolism, disturbances in pigment metabolism, inflammation and tumors.

2. APPLIED PATHOLOGY. INCLUDING GROSS MORBID ANATOMY AND MORBID PHYSIOLOGY. (*Third Year.*) In this course the special relation of lesions to clinical symptoms and signs is emphasized.

In the laboratory the class is divided into groups for the study of classified autopsy material.

3. AUTOPSIES. (*Third Year.*) Small groups of students attend autopsies at the morgues of the University Hospital and Baltimore City Hospitals. They are required to assist at autopsies and to prepare protocols.

4. CLINICAL PATHOLOGICAL CONFERENCE. (*Fourth Year.*) In collaboration with the Department of Medicine, material from autopsies is studied with reference to the correlation of the clinical aspects with the pathological findings.

5. ADVANCED WORK IN PATHOLOGY. Properly qualified students will be permitted to carry out advanced or research work along the lines of experimental pathology.

SUMMARY

Second Year	
Lectures.....	50 hours
Laboratory.....	118 hours
Total.....	168 hours
Third Year	
Lectures.....	30 hours
Laboratory.....	130 hours
Total.....	160 hours
Fourth year	
Clinical Pathological Conference.....	30 hours

DEPARTMENT OF MEDICINE

MAURICE C. PINCOFFS, B.S., M.D.....	Professor of Medicine
JOS. E. GICHNER, M.D.....	Professor of Clinical Medicine and Physical Therapeutics
G. CARROLL LOCKARD, M.D.....	Professor of Clinical Medicine
HARVEY G. BECK, Sc.D., M.D.....	Professor of Clinical Medicine
HARRY M. STEIN, M.D.....	Professor of Clinical Medicine
PAUL W. CLOUGH, B.S., M.D.....	Associate Professor of Medicine
C. C. W. JUDD, A.B., M.D.....	Associate Professor of Medicine
SYDNEY R. MILLER, A.B., M.D.....	Associate Professor of Medicine
WALTER A. BAETJER, A.B., M.D.....	Associate Professor of Medicine
THOMAS R. SPRUNT, M.D.....	Associate Professor of Medicine
WILLIAM H. SMITH, M.D.....	Associate Professor of Clinical Medicine
H. J. MALDEIS, M.D.....	Associate Professor of Medical Jurisprudence
S. LLOYD JOHNSON, A.B., L.L.B., M.D.....	Assistant Professor of Medicine
JOHN G. HUCK, M.D.....	Assistant Professor of Medicine
GEORGE McLEAN, M.D.....	Assistant Professor of Medicine

L. A. M. KRAUSE, M.D.	Assistant Professor of Medicine
H. R. PETERS, M.D.	Assistant Professor of Medicine
W. S. LOVE, JR., A.B., M.D.	Assistant Professor of Medicine
H. M. BUBERT, M.D.	Associate in Medicine
J. S. EASTLAND, M.D.	Associate in Medicine
THOMAS C. WOLFF, M.D.	Associate in Medicine
T. NELSON CAREY, M.D.	Associate in Medicine
WETHERBEE FORT, M.D.	Associate in Medicine
JOHN E. LEGGE, M.D.	Associate in Medicine
M. G. GICHNER, M.D.	Instructor in Medicine
HENRY SHEPPARD, M.D.	Instructor in Medicine
FRANK J. GERAGHTY, M.D.	Instructor in Medicine
L. P. GUNDRY, M.D.	Instructor in Medicine
SAMUEL T. HELMS, M.D.	Instructor in Medicine
BERNARD J. COHEN, M.D.	Instructor in Medicine
EARL L. CHAMBERS, M.D.	Instructor in Medicine
E. H. TONOLLA, M.D.	Instructor in Medicine
NATHANIEL BECK, M.D.	Assistant in Medicine
CARL BENSON, M.D.	Assistant in Medicine
A. SCAGNETTI, M.D.	Assistant in Medicine
W. H. TRIPLETT, M.D.	Assistant in Medicine
DAVID TENNER, M.D.	Assistant in Medicine
M. PAUL BYERLY, M.D.	Assistant in Medicine
H. EDMUND LEVIN, M.D.	Assistant in Medicine
J. HOWARD BURNS, M.D.	Assistant in Medicine
J. G. FEMAN, M.D.	Assistant in Medicine
MORRIS FINE, M.D.	Assistant in Medicine
R. B. MITCHELL, JR., M.D.	Assistant in Medicine
SAMUEL LEGUM, A.B., M.D.	Assistant in Medicine
PHILIP D. FLYNN, M.D.	Assistant in Medicine
HARRY V. LANGELOTTIG, A.B., M.D.	Hitchcock Fellow in Medicine

GENERAL OUTLINE

SECOND YEAR

Introduction to clinical medicine.

(a) Introductory physical diagnosis.

(1 hour a week, first semester; 2 hours a week, second semester.)

(b) Medical clinics.

(1 hour a week, second semester.)

THIRD YEAR

I. The methods of examination (13 hours a week).

(a) History taking.

(b) Physical diagnosis.

(c) Clinical pathology.

These subjects are taught and practiced in the hospital out-patient department and in the clinical laboratory.

- II. The principles of medicine (5 hours a week).
 - (a) Lectures, clinics and demonstrations in general medicine, neurology, pediatrics, psychiatry and preventive medicine.
- III. The principles of therapeutics (10 hours a week).
 - Lectures and demonstrations.

FOURTH YEAR

- The practice of medicine.
- I. Clinical clerkship on the medical wards.
 - (26 hours a week for ten weeks.)
 - (a) Responsibility, under supervision, for the history, physical examination, laboratory examinations and progress notes of assigned cases.
 - (b) Ward classes in general medicine, the medical specialties, and therapeutics.
- II. Clinics in general medicine and the medical specialties.
 - (6 hours a week.)
- III. Dispensary work in the medical specialties.
- IV. Clinical pathological conferences (1 hour a week).

MEDICAL DISPENSARY WORK

The medical dispensaries of both the Mercy and the University Hospitals are utilized for teaching in the third year. Each student spends two hours daily for ten weeks in dispensary work. The work is done in groups of four to six students under an instructor. Systematic history-taking is especially stressed. Physical findings are demonstrated. The student becomes familiar with the commoner acute and chronic disease processes.

PHYSICAL DIAGNOSIS

Second Year. Didactic lectures and practical demonstrations in topographical anatomy and normal physical signs.

Third Year. The class is divided into small groups, and each section receives instruction for two hours daily for ten weeks. This course is given at the City Hospitals. The large clinical material there is utilized to give each student the opportunity to familiarize himself with the common types of bodily structure, with the normal variations in physical signs and with the physical signs of the chief pulmonary, circulatory and abdominal diseases.

A course of lectures (1 hour a week) on physical diagnosis supplements the practical work in this subject.

THERAPEUTICS

Third Year. General therapeutics and materia medica are taken up and an effort is made to familiarize the student with the practical treatment of disease. The special therapy of the chief diseases is then reviewed. One hour a week. Dr. Lockard.

Fourth Year. Special consideration is given to the practical application of therapeutic principles in bedside teaching and the chief therapeutic methods are demonstrated.

Students attend therapeutic ward rounds once a week throughout their medical trimester.

TUBERCULOSIS

During the third year in connection with the instruction in physical diagnosis a practical course is given at the Municipal Tuberculosis Hospital. Stress is laid upon the recognition of the physical signs of the disease, as well as upon its symptomatology and gross pathology.

CARDIOLOGY

During the fourth year an elective course in cardiology is offered at the Mercy Hospital. The course occupies one and one-half hours weekly. Physical diagnosis, electrocardiography and the therapeutic management of cardiac cases are stressed.

SYPHILIS

Third Year. During the third year the subject of syphilis is dealt with in the lecture course.

Fourth Year. An elective course in the therapeutic management of syphilis is offered in the dispensary.

CLINICAL PATHOLOGY

JOHN G. HUCK, M.D.....	Assistant Professor of Medicine
	Head of Department of Clinical Pathology
H. J. MALDEIS, M.D.....	Associate Professor of Medical Jurisprudence
S. LLOYD JOHNSON, A.B., LL.B., M.D.....	Assistant Professor of Medicine
SAMUEL T. HELMS, M.D.....	Instructor in Medicine
E. M. REESE, M.S.....	Assistant in Medicine

During the third year the student is thoroughly drilled in the technic of the usual clinical laboratory work, so that he is able to perform all routine examinations which may be called for during his fourth year, in connection with the work in the wards and dispensary.

The practical work is supplemented by a series of didactic lectures and demonstrations in which the entire teaching staff of the department takes an active part. The microscopical and chemical study of blood, exudates and transudates, gastric juice, spinal fluid, feces and urine are successively taken up, and special attention directed to the clinical significance of the findings.

Clinical parasitology from the standpoint of the infecting agent and the carrier is given careful consideration.

The entire course is thoroughly practical. Each student has his own microscope and is provided with blood counters and hemoglobinometer for his exclusive use, and every two students are equipped with a special laboratory outfit for all routine purposes.

During the fourth year the student applies what he has learned during the preceding year in the laboratories of the various affiliated hospitals. He is also supplied with a laboratory outfit which is sufficiently complete to enable him to work independently of the general equipment. Special instructors are available during certain hours to give necessary assistance and advice.

Lectures.....	32 hours
Laboratory.....	<u>96 hours</u>
Total.....	128 hours

GASTRO-ENTEROLOGY

JULIUS FRIEDENWALD, A.M., M.D.....	Professor of Gastro-Enterology
T. FRED LEITZ, M.D.....	Clinical Professor of Gastro-Enterology
THEODORE H. MORRISON, M.D.....	Associate Professor of Gastro-Enterology
MAURICE FELDMAN, M.D.....	Assistant Professor of Gastro-Enterology
ZACHARIAH MORGAN, M.D.....	Assistant Professor of Gastro-Enterology
SAMUEL MORRISON, M.D.....	Assistant Professor of Gastro-Enterology
JOSEPH SINDLER, M.D.....	Associate in Gastro-Enterology
M. S. KOPPELMAN, M.D.....	Instructor in Gastro-Enterology
Z. VANCE HOOPER, M.D.....	Instructor in Gastro-Enterology
C. VICTOR RICHARDS, M.D.....	Instructor in Gastro-Enterology
H. WILLIAM PRIMAKOFF, M.D.....	Assistant in Gastro-Enterology
AARON C. SOLLOD, M.D.....	Assistant in Gastro-Enterology
ELI CONTRACT, M.D.....	Assistant in Gastro-Enterology
ALBERT J. SHOCHAT, M.D.....	Assistant in Gastro-Enterology
ERNEST LEVI, M.D.....	Assistant in Gastro-Enterology
L. R. SCHOOLMAN, M.D.....	Assistant in Gastro-Enterology

Third Year. A series of 4 lectures is given on the disease of the digestive tract.

Fourth Year. Clinics and demonstrations to the class for one hour a week. Dispensary instruction to small groups throughout the entire session. Practical instruction is given in the use of modern methods of study of the diseases of the gastro-intestinal tract.

PSYCHIATRY

ROSS McC. CHAPMAN, M.D.....	Professor of Psychiatry
RALPH P. TRUITT, M.D.....	Associate Professor of Psychiatry
HARRY GOLDSMITH, M.D.....	Assistant Professor of Psychiatry
LAWRENCE F. WOOLLEY, M.D.....	Assistant Professor of Psychiatry
H. W. NEWELL, M.D.....	Assistant Professor of Psychiatry
HARRY M. MURDOCK, M.D.....	Assistant Professor of Psychiatry

First Year. The student attends six lectures dealing with the development and function of the normal personality.

Second Year. The student attends fourteen lectures dealing with psychopathology.

Third Year. Psychopathology continued, six lectures; reaction types, twelve hours, lectures and demonstrations; the psychoses, six hours, lectures and demonstrations; history-taking and actual study of cases, outpatient clinic, thirty hours.

Fourth Year. The neuroses, psychoneuroses, psychoses, lectures and demonstrations, ten hours. In this year the class is divided into sections for clinical conferences on selected cases.

PEDIATRICS

C. LORING JOSLIN, M.D.....	Professor of Pediatrics
EDGAR B. FRIEDENWALD, M.D.....	Professor of Clinical Pediatrics
JOHN H. TRABAND, M.D.....	Assistant Professor of Pediatrics
ALBERT JAFFE, M.D.....	Assistant Professor of Pediatrics
A. H. FINKELSTEIN, M.D.....	Assistant Professor of Pediatrics
WILLIAM J. TODD, M.D.....	Associate in Pediatrics
WILLIAM G. GEYER, M.D.....	Associate in Pediatrics
CLEWELL HOWELL, M.D.....	Associate in Pediatrics
SAMUEL S. GLICK, M.D.....	Associate in Pediatrics
F. STRATNER OREM, M.D.....	Associate in Pediatrics
FREDERICK SMITH, M.D.....	Associate in Pediatrics
R. M. HENING, M.D.....	Instructor in Pediatrics
MARIE KOVNER, M.D.....	Instructor in Pediatrics
M. PAUL BYERLY, M.D.....	Instructor in Pediatrics
G. BOWERS MANSORFER, M.D.....	Instructor in Pediatrics
J. EDMUND BRADLEY, M.D.....	Instructor in Pediatrics
W. J. SCHMITZ, M.D.....	Assistant in Pediatrics
HARRY A. RUTLEDGE, M.D.....	Assistant in Pediatrics
SAMUEL T. HELMS, M.D.....	Assistant in Pediatrics
WALTER A. ANDERSON, M.D.....	Assistant in Pediatrics
ISRAEL P. MERANSKI, M.D.....	Assistant in Pediatrics
H. D. FRANKLIN, M.D.....	Assistant in Pediatrics
O. WALTER SPURRIER, M.D.....	Assistant in Pediatrics
GUSTAV HIGHSTEIN, M.D.....	Assistant in Pediatrics
S. C. FELDMAN, M.D.....	Assistant in Pediatrics
NELSA LEE WADE, M.D.....	Assistant in Pediatrics

Third Year. Instruction during the third year consists of a short lecture course. The more important diseases of infancy and childhood are reviewed. The principles of infant feeding are presented in brief form.

Fourth Year. Weekly clinical lectures are given at which patients are shown to demonstrate the chief features of the diseases discussed. The students attend a weekly ward round on the pediatric service throughout their medical trimester. A special course on physical diagnosis in children

is given. Sections of the class work daily in the Babies' and Children's Clinic.

NEUROLOGY

IRVING J. SPEAR, M.D.....	Professor of Neurology
ANDREW C. GILLIS, A.M., M.D., LL.D.....	Professor of Neurology
G. M. SETTLE, A.B., M.D.,.....	Associate Professor of Neurology and Clinical Medicine
MILFORD LEVY, M.D.....	Assistant Professor of Neurology
LEON FREEDOM, M.D.....	Assistant Professor of Neurology
RUTH FOSTER, M.D.....	Assistant in Neurology
JAMES G. ARNOLD, JR., M.D.....	Assistant in Neurology

Third Year. Ten lecture-demonstrations are given in which the major types of diseases of the nervous system are presented. A short course is also given at the Baltimore City Hospitals, consisting of six periods of two hours each, in which the students in small groups carry out complete neurologic examinations of selected cases which illustrate the chief neurologic syndromes.

Fourth Year. Clinical conference one hour each week to the entire class. This subject is taught at the University and Mercy Hospitals. All patients presented at these clinics are carefully examined; complete written records are made by the students who demonstrate the patients before the class. The patients are usually assigned one or two weeks before they are presented, and each student in the class must prepare one or more cases during the year.

Ward Class Instruction. In small sections at the University and Mercy Hospitals. In these classes the students come in close personal contact with the patients in the wards under the supervision of the instructor.

Dispensary Instruction. Small sections are instructed in the dispensaries of the University and Mercy Hospitals four afternoons each week. In this way students are brought into contact with nervous diseases in their early and late manifestations.

HYGIENE AND PREVENTIVE MEDICINE

HUNTINGTON WILLIAMS, M.D., Dr. P.H.....	Professor of Hygiene and Public Health
WILLIAM H. F. WARTHEN, M.D.....	Associate in Hygiene and Public Health
MYRON G. TULL, M.D.....	Instructor in Hygiene and Public Health

Third Year. One-hour lecture to the whole class each Monday from September to May and two-hour instruction periods for groups of ten to fifteen students on six Wednesday afternoons. In addition there are four Wednesday afternoon field inspection trips for each third of the class. These trips, under guidance of full time public health workers, include visits to (1) city water filtration plant, (2) rural dairy farm, (3) milk pas-

teurization plant, ice cream plant and bakery, and (4) industrial plant which has an active program of hygiene.

The course deals with the fundamentals of public health including administration, communicable disease and food control and environmental sanitation, including industrial hygiene; with major emphasis on the practice of preventive medicine and the relation of prevention to diagnosis and treatment. Small groups visit Sydenham Hospital periodically and are given practical instruction in the diagnosis, treatment and prevention of the communicable diseases.

Fourth Year. Demonstrations and discussion of public health work with emphasis on those phases which concern the practising physician. (Course under reorganization.)

MEDICAL JURISPRUDENCE

H. J. MALDEIS, M.D.....Associate Professor of Medical Jurisprudence
Baltimore City Post Mortem Physician

Third Year. One hour each week for six weeks.

This course embraces a summary of the following: Proceedings in criminal and civil prosecution, medical evidence and testimony, identity and its general relations, sexual abnormalities, personal identity, impotence and sterility, rape, criminal abortions, signs of death, wounds in their medico-legal relations, death—natural and homicidal, malpractice, insanity, and medico-legal autopsies.

DEPARTMENT OF SURGERY

ARTHUR M. SHIPLEY, Sc.D., M.D.....Professor of Surgery
ALEXIS MCGLANNAN, A.M., M.D., LL.D.....Professor of Surgery
NATHAN WINSLOW, A.M., M.D.....Professor of Clinical Surgery
PAGE EDMUNDS, M.D.....Professor of Traumatic Surgery
WALTER D. WISE, M.D.....Professor of Clinical Surgery
FRANK S. LYNN, M.D.....Professor of Clinical Surgery
ELLIOTT H. HUTCHINS, A.M., M.D.....Professor of Clinical Surgery
CHARLES REID EDWARDS, M.D.....Professor of Clinical Surgery
CHARLES BAGLEY, JR., A.B., M.D.....Professor of Neurological Surgery
F. L. JENNINGS, M.D.....Professor of Clinical Surgery
ROBERT P. BAY, M.D.....Professor of Oral Surgery
THOMAS R. CHAMBERS, A.M., M.D.....Associate Professor of Surgery
R. W. LOCHER, M.D.....Associate Professor of Clinical Surgery
A. M. EVANS, M.D.....Associate Professor of Surgery
EDWARD S. JOHNSON, M.D.....Associate Professor of Surgery
D. J. PESSAGNO, M.D.....Associate Professor of Surgery
CHARLES A. REIFSCNEIDER, M.D.....Associate Professor of Surgery
MONTE EDWARDS, M.D.....Associate Professor of Surgery
CYRUS F. HORINE, M.D.....Associate in Surgery
I. O. RIDGLEY, M.D.....Associate in Surgery

H. F. BONGARDT, M.D.	Associate in Surgery
THOMAS B. AYCOCK, B.S., M.D.	Associate in Surgery
RICHARD G. COBLENTZ, M.D.	Associate in Neurological Surgery
N. CLYDE MARVEL, M.D.	Associate in Surgery
GRANT E. WARD, A.B., M.D.	Associate in Surgery
W. R. JOHNSON, M.D.	Instructor in Surgery
E. M. HANRAHAN, A.B., M.D.	Instructor in Surgery
S. DEMARCO, M.D.	Instructor in Surgery
KARL J. STEINMUELLER, A.B., M.D.	Instructor in Surgery
W. W. WALKER, M.D.	Instructor in Surgery
J. J. LEYKO, M.D.	Instructor in Surgery
GEORGE H. YEAGER, B.S., M.D.	Instructor in Surgery
LUTHER E. LITTLE, M.D.	Instructor in Surgery
J. FRANK HEWITT, A.B., M.D.	Instructor in Surgery
DWIGHT MOHR, M.D.	Assistant in Surgery
WILLIAM R. GERAGHTY, B.S., M.D.	Assistant in Surgery
H. B. McELWAIN, M.D.	Assistant in Surgery
J. G. ONNEN, M.D.	Assistant in Surgery
A. V. BUCHNESS, M.D.	Assistant in Surgery
T. J. TOUHEY, M.D.	Assistant in Surgery
CLYDE F. KARNS, M.D.	Assistant in Surgery
PAUL SCHENKER, M.D.	Assistant in Surgery
ROBERT W. JOHNSON, M.D.	Assistant in Surgery
FRANK K. MORRIS, A.B., M.D.	Assistant in Surgery
J. WILLIS GUYTON, M.D.	Assistant in Surgery
WM. N. McFAUL, JR., M.D.	Assistant in Surgery
SAMUEL H. CULVER, M.D.	Assistant in Surgery
SIMON H. BRAGER, M.D.	Assistant in Surgery
C. W. PEAKE, M.D.	Assistant in Surgery
JAMES C. OWINGS, M.D.	Assistant in Surgery
ALBERT R. WILKERSON, M.D.	Assistant in Surgery
J. W. NELSON, M.D.	Assistant in Surgery
JULIUS GOODMAN, M.D.	Assistant in Surgery
I. RIDGEWAY TRIMBLE, M.D.	Assistant in Surgery

The teaching is done in the anatomical laboratory, the dispensaries, wards, clinical laboratories and operating rooms of the University and Mercy Hospitals, and in the wards and operating rooms of the Baltimore City Hospitals.

Instruction is given by means of lectures, recitations, dispensary work, bedside instruction, ward classes, and clinics. The work begins in the second year, and continues throughout the third and fourth years.

SECOND YEAR

TOPOGRAPHIC AND SURGICAL ANATOMY. The course is designed to bridge the gap between anatomy in the abstract and clinical anatomy as applied to the study and practice of medicine and surgery.

The teaching is done in the anatomical laboratory, and students are

required to demonstrate all points, outlines, and regions on the cadaver. Underlying regions are dissected to bring out outlines and relations of structures.

DIDACTIC LECTURES. Two hours a week for one semester, augmented by demonstrations with specimens, charts, and cross sections. Dr. Monte Edwards.

LABORATORY. Five hours a week for 16 weeks. Dr. Monte Edwards assisted by Drs. Morris, Little and Yeager.

PRINCIPLES OF SURGERY. This course includes history-taking, records of physical examinations and of operations and progress notes; the preparation of surgical dressing, suture materials and solutions. It includes inflammation, infections, ulcers, gangrene, fistulae and sinuses, hemorrhage, shock and tumors. Lectures and conferences, two hours per week for one semester, to the entire class. Dr. C. R. Edwards.

THIRD YEAR

GENERAL AND REGIONAL SURGERY. Lectures, recitations and clinics on the principles of surgery and general surgery are given three hours a week to the entire class. Drs. Lynn and Wise.

The class is divided into groups and receives instruction in history-taking, gross pathology, and surgical diagnosis—at the bedside and in the dead-house of the Baltimore City Hospitals. Drs. Shipley, Lynn, Reifschneider and Aycock.

OPERATIVE SURGERY. Instruction is given in operative surgery upon the cadaver and on dogs. The class is divided into sections, and each section is given practical and individual work under the supervision of the instructors. Dr. Lynn, assisted by Drs. Winslow, E. S. Johnson, Aycock, Demarco, Horine, Pessagno, Onnen, W. R. Johnson, Steinmueller, R. W. Johnson, McFaul, Culver, Brager, Walker, Karns, Covington, Gillis and Peake.

FRACTURES AND DISLOCATIONS. This course consists of instruction in the various forms of fractures, dislocations and their treatment. There is a regular schedule of didactic lectures, which is supplemented by practical demonstrations in diagnosis and treatment. This practical work is given at the Mercy, University and Baltimore City Hospitals. Dr. Horine.

Lecture and conference course two hours weekly to one-third of the class. Dr. Shipley.

SURGICAL DISPENSARY. Under supervision, the student takes the history, makes the physical examinations, attempts the diagnosis, and, as far as possible, carries out the treatment of the ambulatory surgical patients in the University and in the Mercy Hospitals. Mercy Hospital—Drs. Dwight Mohr, Ridgely, Touhey, Bongardt and McElwain. University Hospital—Drs. Lynn, Winslow, Edwards and E. S. Johnson.

FOURTH YEAR

CLINICS. A weekly clinic is given at the Mercy and at the University Hospitals to one-half the class throughout the year. As far as possible this is a diagnostic clinic. Mercy Hospital—Dr. Wise. University Hospital—Dr. Shipley.

SURGICAL PATHOLOGY. A weekly exercise of one hour at Mercy Hospital for one semester at which specimens from the operating room and museum are studied in the gross and microscopically in relation to the case history. Dr. McGlannan.

TRAUMATIC SURGERY. Operative and post-operative treatment of accident cases, with instructions as to the relationship between the state, the employee, the employer, and the physician's duty to each. One hour a week to sections of the class throughout the year. Dr. Edmunds.

CLINICAL CLERKSHIP. The personal study of assigned hospital patients, under supervision of the staffs of the University and Mercy Hospitals, history-taking, and physical examination of patients, laboratory examinations, attendance at operations and observation of post-operative treatment.

WARD CLASSES. Ward class instruction in small groups will consist of ward rounds, surgical diagnosis, treatment and the after-care of operative cases. Mercy Hospital—Drs. Wise, Elliot Hutchins, Evans and Jennings. University Hospital—Drs. Shipley, Edmunds, Lynn and Edwards.

ANAESTHESIA

S. GRIFFITH DAVIS, M.S., M.D.....	Professor of Anaesthesia
E. HOLLISTER DAVIS, A.B., M.D.....	Assistant in Anaesthesia
MELVIN B. DAVIS, B.S., M.D.....	Assistant in Anaesthesia
MARY J. O'BRIEN, R.N.....	Anaesthetist

THIRD YEAR

Lectures on the general physiology of anaesthesia, with consideration of special physiology of each anaesthetic agent. Methods of induction and administration of anaesthesia. Factors influencing the selection of the anaesthetic and types of anaesthetic agents. Preparation and care of the anaesthetized patient.

The lectures are correlated with practical demonstrations during operative clinics at the City Hospitals.

FOURTH YEAR

During operative clinics in both surgery and gynecology each student will be given practical instruction in the administration of anaesthetics and will be required to record such changes as take place in blood pressure, pulse and respiration.

DERMATOLOGY

HARRY M. ROBINSON, M.D.	Professor of Clinical Dermatology
JOHN R. ABERCROMBIE, A.B., M.D.	Associate in Dermatology
FRANCIS ELLIS, A.B., M.D.	Associate in Dermatology
M. HAROLD GOODMAN, A.B., M.D.	Associate in Dermatology
ARTHUR C. MONNINGER, M.D.	Instructor in Dermatology
JOSEPH C. BERNSTEIN, M.D.	Assistant in Dermatology

Clinical conferences are held one hour each week with the entire class. This course consists of demonstrations of the common diseases of the skin in addition to a number of lectures on the general principles of dermatology. Dr. Robinson.

Dispensary instruction in the diagnosis and treatment of skin diseases is given daily at the University Hospital by Drs. Robinson, Ellis, Goodman and Monninger. A similar course of instruction is given at the Mercy Hospital on Tuesdays, Thursdays and Saturdays. These courses are devised for the specific purpose of giving the student close and intimate contact with skin diseases. Students are assigned cases and under supervision are permitted to diagnose and administer accepted treatment.

ORTHOPAEDIC SURGERY

ALLEN FISKE VOSHELL, A.B., M.D.	Professor of Orthopaedic Surgery
ALBERTUS COTTON, A.M., M.D.	Professor of Orthopaedic Surgery
COMPTON RIELY, M.D.	Clinical Professor of Orthopaedic Surgery
MOSES GELLMAN, B.S., M.D.	Associate Professor of Orthopaedic Surgery
HARRY L. ROGERS, M.D.	Associate Professor of Orthopaedic Surgery

In this course didactic, clinical, bedside and out-patient instruction is given. This instruction is provided in the University Hospital Amphitheatre, Mercy Hospital and Dispensary, Kernan Hospital and Industrial School for Crippled Children at "Radnor Park" and in the Dispensary of the University Hospital.

Lectures or clinics are held once a week at each of the hospitals named in town. In addition, a weekly bedside clinic is held for small sections of the class at "Radnor Park" and Mercy Hospital. Daily teaching in the Dispensary is stressed.

The course covers instruction in the special methods of examination, pathology, diagnosis and treatment in this specialty.

Brief outlines and demonstrations are also given of the apparatus employed in physiotherapy, muscle training and corrective gymnastics.

ROENTGENOLOGY

HENRY J. WALTON, M.D.	Professor of Roentgenology
ALBERTUS COTTON, A.M., M.D.	Professor of Roentgenology
EUGENE L. FLIPPIN, M.D.	Associate in Roentgenology
EDGAR G. SMITH, A.B., M.D.	Assistant in Roentgenology

During the academic year small groups of the fourth year class are given weekly demonstrations in the diagnostic and therapeutic uses of the Roentgen rays. An effort is made to familiarize the student with the appearance of normal Roentgenograms, after which instruction is given in the interpretation of the more common pathological lesions seen on the Roentgen films and fluoroscopic screen. The history, physics and practical application of the Roentgen rays are alluded to, but not stressed. Weekly conferences are held with the medical and pathological departments, which are also open to members of the fourth year class.

DISEASES OF THE NOSE AND THROAT

EDWARD A. LOOPER, M.D., D.Oph. Professor of Diseases of the Nose and Throat
 WAITMAN F. ZINN, M.D. Clinical Professor of Diseases of the Nose and Throat
 FRANKLIN B. ANDERSON, M.D. Associate in Diseases of the Nose and Throat
 W. RAYMOND MCKENZIE, M.D. Associate in Diseases of the Nose and Throat
 THOMAS O'ROURK, M.D. Instructor in Diseases of the Nose and Throat
 BIRCKHEAD MCGOWAN, M.D. Assistant in Diseases of the Nose and Throat

Third Year. Instruction to entire class is given in the common diseases of the nose and throat, attention being especially directed to infections of the accessory sinuses, the importance of focal infections in the etiology of general diseases and modern methods of diagnosis. Lectures illustrated by lantern slides are given one hour weekly throughout the second semester by Dr. Looper.

Fourth Year. Dispensary instruction one and one-half hours daily, to small sections at the University and the Mercy Hospitals. The student is given opportunity to study, diagnose and treat patients under supervision. Ward classes and clinical demonstrations are given in periods of one and one-half hours weekly throughout the session in the University and the Mercy Hospitals.

The Looper Clinic, recently established in the University Hospital for bronchoscopy and esophagoscopy, affords unusual opportunities for students to study diseases of the larynx, bronchi and esophagus. The clinic is open to students daily from 2 to 4 P.M., under direction of Dr. Looper.

The Mercy Hospital Clinic for bronchoscopy and esophagoscopy is under the direction of Dr. Zinn. In these two clinics the etiology, symptomatology, diagnosis and treatment of foreign bodies in the air and food passages, as well as bronchoscopy, are taught to students, as an aid in the diagnosis and treatment of diseases of the lungs.

GENITO-URINARY SURGERY

W. H. TOULSON, A.B., M.Sc., M.D. Professor of Genito-Urinary Surgery
 A. J. GILLIS, M.D. Clinical Professor of Genito-Urinary Surgery
 AUSTIN H. WOOD, M.D. Associate in Genito-Urinary Surgery

L. J. MILLAN, M.D.....	Associate in Genito-Urinary Surgery
K. D. LEGGE, M.D.....	Associate in Genito-Urinary Surgery
L. K. FARGO, M.D.....	Associate in Genito-Urinary Surgery
SAMUEL T. HELMS, M.D.....	Instructor in Genito-Urinary Surgery
JOHN F. HOGAN, M.D.....	Instructor in Genito-Urinary Surgery
W. A. C. COUNCILL, M.D.....	Instructor in Genito-Urinary Surgery

Third Year. This course is given from eight to ten hours to the entire class. It consists of lectures and demonstrations including the use of lantern slides and motion pictures. Dr. Toulson.

Fourth Year. The course in this year includes explanations and demonstrations of urethroscopy, cystoscopy, ureteral catheterization, renal function tests, urography, urine cultures and the various laboratory procedures. The teaching consists of clinics and ward rounds to small groups, and attendance by members of the senior class upon the out-patients in the dispensary. The student here is placed much on his own responsibility in arriving at a diagnosis. Members of the Staff are in constant attendance for consultations. These dispensary classes are conducted at both the Mercy and University Hospitals where practically every variety of venereal disease is here encountered and used for teaching purposes.

DISEASES OF THE RECTUM AND COLON

G. MILTON LINTHICUM, A.M., M.D.....	Professor of Diseases of Rectum and Colon
CHARLES F. BLAKE, A.M., M.D.....	Professor of Diseases of Rectum and Colon
J. DAWSON REEDER, M.D.....	Clinical Professor of Diseases of Rectum and Colon
MONTE EDWARDS, M.D.....	Associate in Diseases of Rectum and Colon
JAMES C. OWINGS, M.D.....	Assistant in Diseases of the Rectum and Colon

Third Year. Six hours to the entire class. This course is for instruction in the diseases of the colon, sigmoid flexure, rectum and anus, and will cover the essential features of the anatomy and physiology of the large intestine as well as the various diseases to which it is subject. Dr. Linthicum and Dr. Edwards.

Fourth Year. Ward and dispensary instruction is given in the University and Mercy Hospitals, where different phases of the various diseases are taught by direct observation and examination. The use of the proctoscope and sigmoidoscope in the examination of the rectum and sigmoid is made familiar to each student. Mercy Hospital—Dr. Blake. University Hospital—Drs. Linthicum, Reeder and Monte Edwards.

OTOLOGY

J. W. DOWNEY, M.D.....	Professor of Otology
FRANKLIN B. ANDERSON, M.D.....	Associate in Otology
F. A. HOLDEN, M.D.....	Instructor in Otology
BENJAMIN S. RICH, M.D.....	Assistant in Otology
BIRCKHEAD MCGOWAN, M.D.....	Assistant in Otology

The course in otology is planned to give a practical knowledge of the anatomy and physiology of the ear, and its proximity and relationship to the brain and other vital structures. The inflammatory diseases, their etiology, diagnosis, treatment and complications are particularly stressed, with emphasis upon their relationship to the diseases of children, head-surgery and neurology.

Third Year. The entire class is given instruction by means of talks, anatomical specimens and lantern slides.

Fourth Year. Small sections of the class receive instruction and make personal examinations of patients under the direction of an instructor. The student is urged to make a routine examination of the ear in his ward work in general medicine and surgery.

NEUROLOGICAL SURGERY

CHARLES BAGLEY, JR., A.B., M.D. Professor of Neurological Surgery
 RICHARD G. COBLENTZ, M.D. Associate in Neurological Surgery
 WILLIAM R. GERAGHTY, B.S., M.D. Instructor in Neurological Surgery
 JAMES G. ARNOLD, JR., A.B., M.D. Hitchcock Fellow in Neurological Surgery

Third Year. The course covers instruction in diagnosis and treatment of surgical conditions of the brain, spinal cord, and the peripheral nerves. Eight lectures are given to the entire class and conferences are held from time to time. Dr. Bagley.

Fourth Year. Weekly ward rounds and conferences are given at the University Hospital. Drs. Bagley and Coblentz.

ONCOLOGY

J. MASON HUNDLEY, JR., M.A., M.D. Associate in Gynecology
 GRANT E. WARD, A.B., M.D. Associate in Surgery

Every facility for the diagnosis and treatment of neoplastic diseases is available; this includes electro-surgery, radium therapy and deep X-ray therapy.

An out-patient clinic is held twice weekly which affords an opportunity for instruction to a limited number of students. The gynecological problems are under the supervision of Dr. Hundley, and the general surgical conditions are under the direction of Dr. Ward.

Instruction, other than dispensary teaching, is given to small groups of students, for one hour a week, in the history, physics and practical application of radium. Drs. Ward and Hundley.

ORAL SURGERY

ROBERT P. BAY, M.D. Professor of Oral Surgery
 BRICE M. DORSEY, D.D.S. Professor of Exodontia
 CHARLES A. REIFSCHNEIDER, M.D. . . . Associate Professor of Surgery and Oral Surgery
 WILLIAM E. HAHN, D.D.S. Instructor in Exodontia

This section in the Department of Surgery is established for the teaching of both medical and dental students. A new subdivision in the Dispensary has also been established, and beds will be provided in the University Hospital for the care of patients, who will be available for the teaching of students from both schools.

Senior year: clinics weekly.

Ward instruction and group teaching in dispensary. Instruction includes diagnosis and treatment of diseases of the face, mouth and jaws.

DEPARTMENT OF OBSTETRICS

J. M. H. ROWLAND, M.D., Sc.D., LL.D.	Professor of Obstetrics
L. H. DOUGLASS, M.D.	Professor of Clinical Obstetrics
J. MCFARLAND BERGLAND, M.D.	Associate Professor of Obstetrics
EMIL NOVAK, M.D.	Associate Professor of Obstetrics
E. P. SMITH, M.D.	Associate in Obstetrics
J. G. M. REESE, M.D.	Associate in Obstetrics
M. ALEXANDER NOVEY, A.B., M.D.	Associate in Obstetrics
ISADORE A. SIEGEL, A.B., M.D.	Associate in Obstetrics
E. P. H. HARRISON, A.B., M.D.	Associate in Obstetrics
MARGARET B. BALLARD, M.D.	Assistant in Obstetrics
E. S. EDLAVITCH, M.D.	Assistant in Obstetrics
KENNETH B. BOYD, M.D.	Assistant in Obstetrics
FRANK K. MORRIS, A.B., M.D.	Assistant in Obstetrics
DUDLEY P. BOWE, M.D.	Assistant in Obstetrics
JOHN E. SAVAGE, B.S., M.D.	Assistant in Obstetrics

Third Year. Two lectures and recitations are given each week to the entire class. Drs. Bergland, Novak, Douglass and Rowland.

Manikin work is given to sections of the class. Mercy Hospital, Drs. Smith and Edlavitch—University Hospital, Drs. Douglass, Siegel and Harrison.

Demonstrations in the University Hospital Dispensary are given to sections of the class. Drs. Siegel and Harrison.

Fourth Year. A clinical conference is given each week. Drs. Rowland and Douglass.

Ward classes are given six hours per week, for five weeks, to sections of the class at the University Hospital. Drs. Douglass, Reese and Novey.

Each member of the senior class is required to conduct the delivery of ten women. This work is performed in their homes under the supervision of the teaching and resident staff.

DEPARTMENT OF GYNECOLOGY

.....	Professor of Gynecology
ABRAM S. SAMUELS, M.D.	Associate Professor of Gynecology
GEORGE A. STRAUSS, JR., M.D.	Associate in Gynecology
R. G. WILLSE, M.D.	Associate in Gynecology

THOMAS K. GALVIN, M.D.....	Associate in Gynecology
J. MASON HUNDLEY, JR., M.A., M.D.....	Associate in Gynecology
LEO BRADY, M.D.....	Associate in Gynecology
E. S. EDLAVITCH, M.D.....	Assistant in Gynecology

Third Year. DIADACTIC WORK. A course of fifteen lectures and recitations.

Fourth Year. CLINICAL WORK. Six hours weekly for one trimester. In this course the student writes the clinical history of each patient in the ward and makes a general physical examination, including the blood and urine, before the patient is brought before the class. A pelvic examination is made by six students, and any operation required is then done before a section of the class small enough to see clearly what is being done and how it is done. On a subsequent day the whole group examines, microscopically, sections prepared from material removed from patients that have been before them.

DEPARTMENT OF OPHTHALMOLOGY

CLYDE A. CLAPP, M.D.....	Professor of Ophthalmology
M. RANDOLPH KAHN, M.D.....	Clinical Professor of Ophthalmology
H. K. FLECK, M.D.....	Associate Professor of Ophthalmology
R. D. WEST, M.D.....	Associate in Ophthalmology
HENRY F. GRAFF, A.B., M.D.....	Associate in Ophthalmology
JONAS FRIEDENWALD, A.B., M.D.....	Lecturer in Ophthalmic Pathology
JOSEPH I. KEMLER, M.D.....	Associate in Ophthalmology
F. A. HOLDEN, M.D.....	Instructor in Ophthalmology
FRANK A. PACIENZA, M.D.....	Instructor in Refraction
JOHN G. RUNKLE, M.D.....	Assistant in Ophthalmology
THOMAS O'ROURK, M.D.....	Assistant in Ophthalmology

Third Year. Second semester. Dr. Kahn will give a course reviewing the anatomy and physiology of the eye and the methods used in making the various examinations. Errors of refraction and their effect upon the general system will be explained. Weekly section work, demonstrating the use of the ophthalmoscope, will be carried on during the entire session.

Fourth Year. Clinics and demonstrations in diseases of the eye, weekly, for one year. Dr. Clapp.

This course consists of lectures upon the diseases of the eye, with particular reference to their diagnosis and relation to general medicine. Special lectures will be given upon vascular changes in the eye and upon the pathology of the eye. Some operations will be demonstrated by motion pictures.

Weekly ward classes at the University, The Baltimore Eye, Ear and Throat and Mercy Hospitals during which the eye grounds in the various medical and surgical conditions are demonstrated. Drs. Fleck, West, Kemler and Graff.

Also daily demonstrations are given in the taking of histories and the diagnosis and treatment of the various conditions as seen in the dispensary.

Third Year—

Lectures	20 hours
Ophthalmoscopy	<u>10 hours</u>
Total.....	30 hours

Fourth Year—

Lectures and demonstrations.....	26 hours
Clinical work.....	<u>20 hours</u>
Total.....	46 hours

DEPARTMENT OF ART AS APPLIED TO MEDICINE

CARL DAME CLARKE..... Associate in Art as Applied to Medicine

This department is maintained for the purpose of supplying pictorial and plastic illustrations for visual teaching in the classrooms of the University and for publication in scientific periodicals.

Special courses of instruction are given to qualified students.

HISTORY OF MEDICINE

JOHN RATHBONE OLIVER, M.D., PH.D..... *Professor of the History of Medicine*

In this department, a series of lectures is given each year in March, April and May. The course is planned so that the entire field of Medical History may be covered in four years. Any medical student attending these lectures during his four years' course will be given, at least, an outline of the history of his profession.

During the past academic year, the lectures have been devoted to the Medicine of the Middle Ages, the birth of modern Anatomy during the Renaissance and the foundations of Physiology, in connection with the discoveries of Harvey. The lectures are illustrated with lantern slides; also important books, which bear on the subject of each lecture, are brought into the lecture room and passed around among the students. In this way, each student will be able to say, for instance, that he has held in his own hands a copy of the *De Fabrica* of Vesalius and a copy of Harvey's *De Motu Cordis*.

The department was fortunate in having been able to hear one visiting lecturer, Dr. Owsei Temkin of the Institute of the History of Medicine at the Johns Hopkins University, who is a distinguished authority on Arabic Medicine and who gave one lecture on that subject.

In the coming year 1935-36, the lectures will deal with the medicine of the 18th Century and the beginnings of modern medicine and hygiene in the 19th Century.

The Head of the Department is always glad to welcome any student who is interested in Medical History and will be glad to advise him as to his reading or to suggest subjects for special study.

FIRST YEAR SCHEDULE

FIRST SEMESTER, SEPTEMBER 26, 1935 TO FEBRUARY 1, 1936

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9.00 to 12.00	†Gross Anatomy—Lectures and Laboratories					
12.00 to 1.00	Lunch					
1.00 to 5.00	Gross Anatomy—Lectures and Laboratories					

†No classes on Wednesdays from 9–12 after November 13, 1935

SECOND SEMESTER, FEBRUARY 3 TO MAY 30, 1936

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9.00 to 10.00		Biological Chemistry Laboratory				
10.00 to 11.00	Introductory Physiology <i>29 S. Greene</i>					
11.00 to 12.00	Biological Chemistry <i>C. H.</i>	<i>Sect. A</i>	<i>Sect. B</i>	<i>Sect. A</i>	<i>Sect. B</i>	
12.00 to 12.50	Lunch	Lunch	Lunch	Lunch	Lunch	
12.50 to 1.50	Biological Chemistry <i>Adm. 1</i>	Biological Chemistry <i>C. H.</i>	Biological Chemistry <i>C. H.</i>	Biological Chemistry <i>C. H.</i>	Biological Chemistry <i>C. H.</i>	
2.00 to 3.00	Histology and Embryology Laboratory <i>32–34 S. Paca St.</i>		*Psychiatry — Introductory Physiology — <i>Adm. 1</i>	Histology and Embryology Laboratory <i>32–34 S. Paca St.</i>		
3.00 to 5.00						

* Psychiatry—February 5–March 11, 1936. During this time Introductory Physiology will be given from 3 to 4 p.m., also in Adm. 1.

Locations of Lecture Halls and Laboratories:

Adm. 1—First Floor, Administration Building, Lombard and Greene Streets.
A. H.—Anatomical Hall—Upper Hall, N. E. Cor. Lombard and Greene Streets.
C. H.—Chemical Hall, Lower Hall, N. E. Cor. Lombard and Greene Streets.
Anatomy Laboratory—Third Floor, Gray Laboratory, Lombard and Greene Streets.
Biological Chemistry Laboratory—Third Floor, 31 S. Greene Street.
Histology and Embryology Laboratory—32–34 S. Paca Street, Sixth Floor.

Mid-Year Examinations—January 27–February 1, 1936

Final Examinations—May 25–30, 1936

(This schedule is subject to revision for 1935–1936)

SECOND YEAR SCHEDULE
FIRST SEMESTER, SEPTEMBER 26, 1935 TO FEBRUARY 1, 1936

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9.00 to 10.00	Pharmacology <i>Adm. 1</i>	Pharmacology <i>Adm. 1</i>	Medicine <i>Adm. 1</i>	Laboratory *Physiology <i>Sect. A</i>	Laboratory *Physiology <i>Sect. B</i>	
10.00 to 11.00	Physiology <i>Adm. 1</i>	Physiology <i>Adm. 1</i>	Bacteriology <i>A. H.</i>	Pharmacology <i>Sect. B</i>	Pharmacology <i>Sect. A</i>	
11.00 to 12.00	Pathology <i>A. H.</i>	Pathology <i>A. H.</i>				
12.00 to 12.30	Lunch	Lunch	Lunch	Lunch	Lunch	
12.30 to 1.30	†Bacteriology Laboratory	Bacteriology Laboratory	Bacteriology Laboratory	Bacteriology Laboratory		
1.30 to 2.30					Psychiatry <i>Adm. 1</i>	
2.30 to 5.30	†Neuro- Anatomy	Neuro- Anatomy	Neuro- Anatomy	Laboratory Physiology <i>Sect. B</i>	Laboratory Physiology <i>Sect. A</i>	

* Physiology Laboratory begins October 31, 1935.

† Bacteriology Laboratory—section work during the last month.

‡ Neuro-anatomy—September 26 to November 27, 1935.

SECOND SEMESTER, FEBRUARY 3 TO MAY 30, 1936

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8.30 to 9.30	Surgery <i>Adm. 1</i>	Surgery <i>Adm. 1</i>	Surgical Anatomy <i>Adm. 1</i>	Laboratory	Laboratory	
9.30 to 10.30	Pharmacology <i>Adm. 1</i>	§Physiology <i>Adm. 1</i>	Surgical Anatomy Laboratory	Physiology <i>Sect. A</i>	Physiology <i>Sect. B</i>	Pharmacology <i>Adm. 1</i>
10.30 to 11.30	Pathology <i>A. H.</i>	Pathology <i>A. H.</i>		Pharmacology <i>Sect. B</i>	Pharmacology <i>Sect. A</i>	Physiology <i>Adm. 1</i>
11.30 to 12.00	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
12.00 to 2.00	Pathology Laboratory	Pathology Laboratory	Pathology Laboratory	Pathology Laboratory	Pathology Laboratory	(12-1) Medical Clinic <i>Amp.</i>
2.00 to 3.00	Surgical Anatomy <i>Adm. 1</i>	Immunology ||Laboratory	Immunology Laboratory	Physiology Laboratory <i>Sect. B</i>	Physiology Laboratory <i>Sect. A</i>	
3.00 to 5.00	Surgical Anatomy Laboratory			— Physical Diagnosis <i>Sect. A</i> (3.00-5.30)	— Physical Diagnosis <i>Sect. B</i> 3.00-5.30	

§ Physiology Course ends May 2, 1936.

|| Immunology Laboratory—section work during last two months.

Locations of Lecture Halls and Laboratories:

Adm. 1—First Floor, Administration Building, Lombard and Greene Streets.

A. H.—Anatomical Hall—Upper Hall, Lombard and Greene Streets.

C. H.—Chemical Hall, Lower Hall, Lombard and Greene Streets.

Amp.—Amphitheatre, University Hospital, Lombard and Greene Streets.

Laboratories:

Bacteriology—Second Floor, 31 S. Greene Street.

Immunology—Second Floor, 31 S. Greene Street.

Neuro-Anatomy—32-34 S. Paca Street.

Pathology—Second Floor, 31 S. Greene Street.

Pharmacology—Second Floor, Gray Laboratory, Lombard and Greene Streets.

Physiology—First Floor, Gray Laboratory, Lombard and Greene Streets.

Surgical Anatomy—Third Floor, Gray Laboratory, Lombard and Greene Streets.

Mid-Year Examinations—January 27-February 1, 1936

Final Examinations—May 25-30, 1936

(This schedule is subject to revision for 1935-36)

THIRD YEAR SCHEDULE

SEPTEMBER 26, 1935 TO MAY 30, 1936

SCHEDULE 1

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8.30 to 9.30	(Whole Class) Obstetrics <i>C. H.</i>	(Whole Class) Surgery <i>C. H.</i>	(Whole Class) Obstetrics <i>C. H.</i>	(Whole Class) Surgery <i>C. H.</i>	(Whole Class) Pathology <i>C. H.</i>	(Whole Class) Medicine <i>C. H.</i>
9.30 to 10.00	Transfer to Baltimore City Hospitals					
10.00 to 12.00	Physical Diagnosis at <i>B. C. H.</i>					
12.00 to 1.00	Transfer and Lunch	Transfer and Lunch	Lunch	Transfer and Lunch	Lunch	
1.00 to 2.00	(Whole Class) *Fractures and Dislocations †Surgical Specialties <i>C. H.</i>	(Whole Class) *Gynecology <i>C. H.</i> †Eye—10 wks. Ear—5 wks. <i>Adm. I</i>	Medical Clinic <i>B. C. H.</i>	(Whole Class) Clinical Pathology <i>Adm. I</i>	Obstetrical Clinic <i>B. C. H.</i>	
2.00 to 4.00	(Whole Class) Pathology Laboratory		Surgery, Pathology and Neurology <i>B. C. H.</i>	(Whole Class) Laboratory —	Surgery, Pathology and Neurology <i>B. C. H.</i>	
4.00 to 5.00	(Whole Class) Preventive Medicine <i>C. H.</i>	(Whole Class) Preventive and Legal Medicine Mental Hygiene <i>C. H.</i>		Clinical Pathology		

* First semester.

† Second semester.

SCHEDULE 2

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8.30 to 9.30	Same as Schedule 1					
9.30 to 10.30	Pediatrics <i>C. H.</i>	Medicine <i>C. H.</i>	Surgery <i>C. H.</i>	Therapeutics <i>C. H.</i>	Surgery <i>C. H.</i>	Neurology <i>C. H.</i>
10.30 to 12.30	Operative Surgery					
12.30 to 1.00	Lunch	Lunch	Lunch	Lunch	Lunch	
1.00 to 2.00	Same as Schedule 1		Medical Clinic <i>Am p.</i>	Same as Schedule 1	Psychiatry <i>U. H. Disp.</i>	
2.00 to 4.00			(2.00-4.30) Public Health			
4.00 to 5.00						

SCHEDULE 3

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8.30 to 9.30	Same as Schedule 1					
9.30 to 12.30	Medical and Surgical Dispensary (University and Mercy Sections)					
12.30 to 1.00	Lunch	Lunch	Lunch	Lunch	Lunch	
1.00 to 2.00	Same as Schedule 1		Medical Clinic <i>Amp.</i>	Same as Schedule 1		Dermatology — Obstetrics — <i>U. H. Disp.</i>
2.00 to 4.00			Ophthalmoscopy (5 weeks) <i>B. E. H.</i> — Practical Obstetrics (5 weeks) <i>Univ. Hosp.</i>			
4.00 to 5.00						

The Junior Class will be divided into three sections—A, B and C. All sections report to classes in keeping with the following schedule assignment, in which the letters represent the class sections and the numerals indicate the schedules to be followed for the 10-week periods shown.

Schedule Assignment

Periods	Sections and Schedules
September 26 to November 27.....	A-1, B-2, C-3
December 2 to February 29.....	C-1, A-2, B-3
March 2 to May 16.....	B-1, C-2, A-3

Locations of Lecture Halls, etc.

Adm. 1—First Floor, Administration Building, Lombard and Greene Streets.
 C. H.—Chemical Hall—Lower hall, N. E. corner Lombard and Greene Streets.
 B. C. H.—Baltimore City Hospitals, 4940 Eastern Avenue.
 B. E. H.—Baltimore Eye, Ear and Throat Hospital, 1214 Eutaw Place.

Mid-Year Examinations—January 27–February 1, 1936

Final Examinations—May 18–30, 1936

(This schedule is subject to revision for 1935–1936)

FOURTH YEAR SCHEDULE

SEPTEMBER 26, 1935 TO MAY 30, 1936

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9.00 to 11.00	Ward Classes Medicine Surgery Obstetrics	Ward Classes Medicine Surgery Gynecology	Ward Classes Medicine Surgery Obstetrics	Ward Classes Medicine Surgery Gynecology	Ward Classes Medicine Surgery Obstetrics	Ward Classes Medicine Surgery Gynecology
11.00 to 12.00	Orthopaedic Surgery <i>Univ. Sec. Amp. P. & S. Sec. 51</i>	Medical Clinic <i>Univ. Sec. Amp. Surgical Pathology P. & S. Sec. 40</i>	Clinical Pathological Conference <i>Univ. Sec. C. H. P. & S. Sec. 34</i>	Surgical Clinic <i>Univ. Sec. Amp. P. & S. Sec. 51</i>	Medical Clinic <i>Univ. Sec. Amp. P. & S. Sec. 34</i>	Pediatric Clinic <i>Univ. Sec. Amp. P. & S. Sec. 34</i>
12.00 to 2.00	Dispensary Lunch and Transfer	Dispensary and Lunch	Dispensary Lunch and Transfer	Dispensary and Lunch	Dispensary Lunch and Transfer	Dispensary
2.15 to 3.15	Dermatology Clinic (Full Class at Univ. Hosp.) <i>Amp.</i>	Neurology Clinic <i>Univ. Sec. Amp. P. & S. Sec. 34</i>	Eye and Ear Clinic (Full Class at Univ. Hosp.) <i>Amp. & C. H.</i>	Obstetrical Clinic (Full Class at Univ. Hosp.) <i>Amp.</i>	Gastro-Enterology Clinic (Full Class at Univ. Hosp.) <i>Amp.</i>	
3.30 to 5.00	<i>P. & S. Sect.</i> Ward Classes Medicine Eye and Ear	<i>P. & S. Sect.</i> Ward Classes Medicine Orthopedics	<i>P. & S. Sect.</i> Ward Classes Medicine Nose and Throat Preventive Medicine	<i>P. & S. Sect.</i> Ward Classes Medicine Proctology Pediatrics	<i>P. & S. Sect.</i> Ward Classes Neurology Roentgenology Psychiatry	
3.30 to 5.00	<i>Univ. Sect.</i> Ward Classes Medicine Roentgenology Neurological Surgery	<i>Univ. Sect.</i> Ward Classes Therapeutics Proctology Oncology (3.30-4.30) Adm. 1	<i>Univ. Sect.</i> Ward Classes Medicine Urology Eye and Ear	<i>Univ. Sect.</i> Ward Classes Medicine Nose and Throat Physical Therapeutics	<i>Univ. Sect.</i> Ward Classes Neurology Psychiatry Orthopedic Surgery (Kernan Hospital)	
5.00 to 6.00				*History of Medicine C. H.		

* March, April and May, 5-6 p. m.
The Senior Class is divided into two sections, which report, one at Lombard and Greene Streets, the other at Calvert and Saratoga Streets, for one semester each, then rotate.
Each section of the class is divided into three groups—Medical, Surgical, and Special. These groups will rotate on the following dates:

First Semester

1st period.....Sept. 26-Nov. 2
2nd period.....Nov. 4-Dec. 7
3rd period.....Dec. 9-Jan. 25

Second Semester

1st period.....Feb. 3-Mar. 7
2nd period.....Mar. 9-Apr. 8
3rd period.....Apr. 15-May 16

C. H.—Chemical Hall—N. E. Cor. Lombard and Greene Streets.
Amp.—Amphitheatre—University Hospital.
P. & S., 34—Second Floor, Calvert and Saratoga Streets.
P. & S., 40, 51—Fourth Floor, Calvert and Saratoga Streets.

For sub-sections of P. & S. ward classes, 3.30 to 5.00 p. m., see supplementary schedule at Mercy Hospital. For sub-sections of U. H. ward classes, 3.30 to 5.00 p. m., see Medical School Bulletin Board.

Mid-Year Examinations—January 27-February 1, 1936

Final Examinations—May 18-23, 1936

(This schedule is subject to revision for 1935-1936)

REQUIREMENTS FOR MATRICULATION

Admission to the course in medicine is by a completed Medical Student Certificate issued by the Registrar of the University of Maryland. This certificate is obtained from the Registrar on the basis of satisfactory educational credentials, and is essential for admission to any class.

The minimum requirements for the issuance of the Medical Student Certificate are:

(a) The completion of a four-year curriculum in an approved secondary school, or the equivalent in entrance examinations; and

(b) Credit for not less than two full academic years with a normal schedule of classes in an accredited college or university. The curriculum should include biology (1), general inorganic chemistry (2), organic chemistry, physics, English, and a modern foreign language (3). Every course should have full premedical and baccalaureate degree credit.

(1) The primary year-course in biology may be composed entirely of zoology. If botany is a part of the year-course, then not more than one semester should be devoted to plant biology.

It is desirable that comparative vertebrate anatomy, embryology, and histological technique be made a part of the preprofessional course of study.

(2) Qualitative analysis may be included in the year-course in general inorganic chemistry.

It is advantageous, also, to complete courses in quantitative analysis and introductory physical chemistry.

(3) To make a balanced curriculum selections should be made, too, from the additional elective courses that are listed below:

Advanced English and modern foreign language

Mathematics

Economics, history, political science, sociology, psychology, etc.

While the School of Medicine announces a minimum requirement for entrance of two years of premedical training, the Faculty Council recommends strongly that not less than three years of preprofessional training be taken and that all students who find it possible to do so should earn a baccalaureate degree.

Each prospective candidate for admission to the study of medicine should take the Medical Aptitude Test given each fall by the Association of American Medical Colleges in the institutions that are preparing students for medicine.

COMBINED COURSE IN ARTS AND SCIENCES, AND MEDICINE

A combined seven years' curriculum leading to the degrees of Bachelor of Science and Doctor of Medicine is offered by the University of Maryland. The first three years are taken in residence in the College of Arts and Sciences at College Park, and the last four years in the School of Medicine in Baltimore. (See University catalogue for details of quantitative and qualitative premedical course requirements.)

Upon the successful completion of the first year in the School of Medicine, and upon the recommendation of the Dean, the degree of Bachelor of Science may be conferred by the College of Arts and Sciences.

Students are urged to consider carefully the advantages this combination course offers over the minimum requirements of two years. By completing three years the training may be gradually broadened by a wider latitude in the election of courses in the arts subjects.

POST-GRADUATE STUDENTS

Graduates in medicine desiring to take the work of the senior year without being candidates for the degree, and, therefore, without examination, may receive a certificate of attendance on completing the full course satisfactorily.

RULES

1. All students are required to take the spring examinations unless excused by the Dean. No student will be permitted to advance from a lower to a higher class with conditions.

2. Should a student be required to repeat any year in the course, he must pay regular fees.

3. A student failing in final examinations for graduation at the end of the fourth year will be required to repeat the entire course of the fourth year and to take examinations in such other branches as may be required, should he again be permitted to enter the school as a candidate for graduation.

4. The general fitness of a candidate for graduation, as well as the results of his examinations, will be taken into consideration by the Faculty.

5. All students are required to provide themselves with microscopes of a satisfactory type.

A standard microscope of either Bausch & Lomb, Leitz, Spencer, or Zeiss make, fitted with the following attachments, will fill the requirements:

Triple nose piece: 10 x and 5 x Oculars

Wide aperture stage: 16 mm. and 4 mm. Objectives

Quick Screw condenser (Abbe): 1.9 mm. 125 N.A. Oil Immersion Lens

All used microscopes are subject to inspection and approval before their use in the laboratory is permitted. The student is cautioned against the purchase of such an instrument before its official approval by the school.

STUDENTS MUST BE PREPARED TO PURCHASE MICROSCOPES AT THE BEGINNING OF THE FIRST YEAR

All the above rules, as well as the fees stated below, relate to the year ending June 6th, 1936 only. The right is reserved to make changes in the curriculum, the requirements for graduation, the fees and in any of the regulations whenever the Faculty deems it expedient.

FEES

Matriculation fee (paid once).....	\$10.00
Tuition fee (each year) for residents of Maryland.....	375.00
Tuition fee (each year) for non-residents.....	550.00
Laboratory fee (each year).....	25.00
Special and re-examination fee.....	5.00
Graduation fee.....	15.00

No fees are returnable.

The above fees apply to all students who matriculate in the School of Medicine in any class for the session beginning September 26, 1935.

All students, after proper certification, are required to register at the Office of the Registrar. (See calendar in front part of this bulletin for dates for the payments of fees, and the note regarding late registration fee.)

The matriculation fee is payable at the time the applicant is offered acceptance as a student.

The laboratory fee and one-half of the tuition fee for the year shall be paid at the time of the first semester registration, and the remainder of the tuition fee shall be paid at the second semester registration date.

Failure to meet these conditions will debar automatically the student from attendance on classes and other privileges of the University.

When offering checks in payment of tuition and other fees, students are requested to have them drawn in the exact amount of such fees. Personal checks whose face value is in excess of the fees due will be accepted only for collection.

DEFINITION OF RESIDENCE STATUS OF STUDENTS*

Students who are minors are considered to be resident students if, at the time of their registration, the parents* have been residents of this State for at least one year.

Adult students are considered to be resident students if, at the time of their registration, they have been residents of this State for at least one year, provided such residence has not been acquired while attending any school or college in Maryland.

The status of the residence of a student is determined at the time of his first registration in the University and may not thereafter be changed by him unless, in the case of a minor, his parents* move to and become legal residents of this State by maintaining such residence for at least one full calendar year. However, the right of the student (minor) to change from a non-resident to a resident status must be established by him prior to registration for a semester in any academic year.

STATE MEDICAL STUDENT QUALIFYING CERTIFICATES

Candidates for admission who live in or expect to practice medicine in Pennsylvania, New Jersey or New York, should apply to their respective state boards of education for medical student qualifying certificates (Pennsylvania and New Jersey) or approval of applications for medical student qualifying certificates (New York).

Those students who are accepted here must file their state certificates in the Office of the Registrar, University of Maryland, during the period of attendance in the School of Medicine.

MEDICAL CARE OF STUDENTS

The Medical Council has made provision for the systematic care of students in the Medical School, according to the following plan:

1. *Preliminary Examination*—All new students will be examined during the first week of the semester. Notice of the date, time, and place of the examination will be announced to the classes and on the bulletin board. The passing of this physical examination is necessary before final acceptance of any student.

2. *Medical Attention*—Students in need of medical attention will be seen by the School Physician, Dr. T. N. Carey, in his office at the Medical

* The term "parents" includes persons who, by reason of death or other unusual circumstances, have been legally constituted the guardians of or stand in loco parentis to such minor students.

School, between 4 and 5 P.M., daily, except Saturday and Sunday. In cases of necessity, students will be seen at their homes.

3. *Hospitalization*—If it becomes necessary for any student to enter the hospital during the school year, the Medical Council has arranged for the payment of part or all of his hospital expenses, depending on the length of his stay and special expenses incurred. This applies only to students admitted through the School Physician's Office.

4. Prospective students are advised to have any known physical defects corrected before entering school in order to prevent loss of time which later correction might incur. As minor visual defects are frequently unrecognized until detected by an ophthalmologist, it is especially urged that all new students have their eyes examined and any error of refraction corrected before beginning the course.

PRIZES AND SCHOLARSHIPS

FACULTY PRIZE

The Faculty each year awards a Gold Medal to the Graduate who during the four years of his course has shown the greatest proficiency in preparing for the practice of medicine. The five candidates standing next in order will be awarded Certificates of Honor.

DR. A. BRADLEY GAITHER MEMORIAL PRIZE

A prize of \$25.00 is given each year by Mrs. A. Bradley Gaither as a memorial to the late Dr. A. Bradley Gaither, to the student in the senior class doing the best work in Genito-Urinary Surgery.

SCHOLARSHIPS*

The Dr. Samuel Leon Frank Scholarship

(Value \$125.00)

This scholarship was established by Mrs. Bertha Rayner Frank as a memorial to the late Dr. Samuel Leon Frank, an alumnus of this University.

It is awarded by the Trustees of the Endowment Fund of the University each year upon nomination by the Medical Council "to a medical student of the University of Maryland, who in the judgment of said Council, is of good character and in need of pecuniary assistance to continue his medical course."

This scholarship is awarded to a second, third or fourth year student

* Note: Scholarships, unless specifically renewed on consideration of application, are for one year only.

who has successfully completed one year's work in this school. No student may hold such scholarship for more than two years.

The Charles M. Hitchcock Scholarships

(Value \$125.00 each)

Two scholarships were established from a bequest to the School of Medicine by the late Charles M. Hitchcock, M.D., an alumnus of the University.

These scholarships are awarded annually by the Trustees of the Endowment Fund of the University, upon nomination by the Medical Council, to students who have meritoriously completed the work of at least the first year of the course in medicine, and who present to the Council satisfactory evidence of a good moral character and of inability to continue the course without pecuniary assistance.

The Randolph Winslow Scholarship

(Value \$125.00)

This scholarship was established by Prof. Randolph Winslow, M.D., LL.D.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon nomination by the Medical Council, to a "needy student of the Senior, Junior, or Sophomore Class of the Medical School."

"He must have maintained an average grade of 85% in all his work up to the time of awarding the scholarship."

"He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance."

Dr. Leo Karlinsky Memorial Scholarship

(Value \$200.00)

This scholarship was established by Mrs. Ray Mintz Karlinsky as a memorial to her husband, the late Dr. Leo Karlinsky, an alumnus of the University.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon the nomination of the Medical Council, to "a needy student of the Senior, Junior or Sophomore Class of the Medical School."

He must have maintained in all his work up to the time of awarding the scholarship a satisfactory grade of scholarship.

He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance.

The University Scholarships

Two scholarships are awarded by the University: One to a student of the College of Arts and Sciences appointed by the President, to be held for

only one year; the other, which entitles the holder to exemption from payment of the tuition fee of the year, is awarded annually by the Medical Council to a student of the senior class who presents to the Medical Council satisfactory evidence that he is of good moral character and is worthy of and in need of assistance to complete the course.

Frederica Gehrmann Scholarship

(Not open to holders of Warfield and Cohen Scholarships)

This scholarship was established by the bequest of the late Mrs. Frederica Gehrmann and entitles the holder to exemption from payment of tuition fees. The scholarship is awarded to a third-year student who at the end of the second year has passed the best practical examinations in Physiology, Pharmacology, Pathology, Bacteriology, Immunology, Serology, Surgical Anatomy and Neuro-Anatomy.

The Clarence and Geneva Warfield Scholarships

(Value \$300.00 each)

There are five scholarships established by the Regents from the income of the fund bequeathed by the will of Dr. Clarence Warfield.

Terms and Conditions: These scholarships are available to students of any of the classes of the course in medicine. Preference is given to students from the counties of the State of Maryland which the Medical Council may from time to time determine to be most in need of medical practitioners.

Any student receiving one of these scholarships must agree, after graduation and a year's internship, to undertake the practice of medicine, for a term of two years, in the county to which the student is accredited, or in a county selected by the Council. In the event that a student is not able to comply with the condition requiring him to practice in the county to which he is accredited by the Council, the money advanced by the Regents shall be refunded by the student.

Israel and Cecilia E. Cohen Scholarship

(Value \$250.00)

This scholarship was established by Miss Eleanor S. Cohen in memory of her parents, Israel and Cecelia E. Cohen. Terms and conditions: This scholarship will be available to students of any one of the classes of the course in Medicine; preference is given to students of the counties in the State of Maryland which the Medical Council may from time to time determine to be most in need of medical practitioners. Any student receiving one of these scholarships must, after graduation and a year's internship,

agree to undertake the practice of medicine for a term of two years in the county to which the student is accredited, or in a county selected by the Council. In the event that a student is not able to comply with the condition requiring him to practice in the county to which he is accredited by the Council, the money advanced by the Regents shall be refunded.

ANNUAL HOSPITAL APPOINTMENTS

Each session the following annual appointments are made from among the graduates of the school:

TO THE UNIVERSITY HOSPITAL

Two Residents in Surgery	Resident in Nose and Throat
Two Residents in Medicine	Resident in Roentgenology
Three Residents in Obstetrics	Thirteen Senior Internes rotating in
Two Residents in Gynecology	Medicine and Surgery
Resident in Pediatrics	Twelve Junior Internes rotating in the
	Specialties

TO THE MERCY HOSPITAL

Chief Resident Physician	Resident in Nose and Throat
Two Residents in Medicine	Resident in Pathology
Four Residents in Surgery	Nine Internes on a Rotating Service
Resident in Gynecology	

NOTICE TO STUDENTS

The personal expenses of the students are at least as low in Baltimore as in any large city in the United States. The following estimates of a student's personal expenses for the academic year of eight months have been prepared by students, and are based upon actual experience. *In addition to these the student must bear in mind the expenditure for a microscope.*

Items	Low	Average	Liberal
Books	\$50	\$75	\$100
College Incidentals	20	20	20
Board, eight months	200	250	275
Room rent	64	80	100
Clothing and laundry	50	80	150
All other expenses	25	50	75
Total	\$409	\$556	\$720

Students will save time and expense upon their arrival in the city by going directly to the School of Medicine on the University grounds, N. E. Corner Lombard and Greene Streets. Here may be found a list of com-

fortable and convenient boarding houses suitable to their means and wishes.

For further information, apply to

J. M. H. ROWLAND, *Dean*,
Lombard and Greene Streets.

GRADUATES, UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS, JUNE 1, 1935

- | | |
|--------------------------------------|----------------|
| Adelman, Milton Harris, B.S.... | New York |
| Albrittain, John Warren, B.S.... | Maryland |
| Alessi, Edward James..... | Maryland |
| Alonso, Miguel, B.S..... | Puerto Rico |
| Alpert, George, A.B..... | Massachusetts |
| Anderson, John Bascom, A.B. | |
| | North Carolina |
| Aungst, Melvin Rauch..... | Pennsylvania |
| Barnes, Henry Eugene, Jr., B.S. | |
| | North Carolina |
| Battaglia, Dominic Thomas, B.S. | |
| | Maryland |
| Bierer, Dan George, B.S.... | Pennsylvania |
| Bock, Charles Aloysius, B.S.... | Pennsylvania |
| Brouillet, George Hector, B.S. | |
| | Massachusetts |
| Bunn, James Pettigrew, Jr., B.S. | |
| | North Carolina |
| Cassidy, William Adrian, A.B..... | Maine |
| Cornbrooks, Ernest Ivon, Jr., A.B. | |
| | New Jersey |
| Cotter, Edward Francis..... | Maryland |
| Cutler, Frank Henry, A.B..... | Utah |
| Dickey, Francis George, A.B.... | Maryland |
| Diehl, Earl Henry..... | Maryland |
| Dodge, Douglas Rude..... | Michigan |
| Doerner, Alexander Andrew, A.B. | |
| | New York |
| Du Bois, Robert Lionel..... | Connecticut |
| Dunnigan, William Charles, A.B. | |
| | Maryland |
| Einhorn, Samuel Edward, B.S.... | New Jersey |
| Ewald, August Ludwig, Jr., B.S. | |
| | Maryland |
| Fader, Ferdinand, A.B..... | New Jersey |
| Freeman, Irving, B.S..... | Maryland |
| Fruchtbaum, Robert Pearson, B.S. | |
| | New Jersey |
| Galitz, Philip Jacob, M.A..... | New York |
| Gerwig, Walter Henry, Jr.... | West Virginia |
| Godbey, John Randolph.... | West Virginia |
| Grenzer, William Howard, A.B.... | Maryland |
| Gross, Joseph Bernard..... | Maryland |
| Hammill, Gerard Paul, B.S.... | Pennsylvania |
| Hamrick, John Carl, B.S.... | North Carolina |
| Harris, Aaron..... | Maryland |
| Hartman, Ira Frank, A.B., B.S. | |
| | West Virginia |
| Heghinian, Jeannette Rosaline E. | |
| | Maryland |
| Helfrich, William Goldsborough, B.S. | |
| | Maryland |
| Herald, James Kennedy..... | Ohio |
| Herrold, Lewis Charles, B.S.... | Pennsylvania |
| Hollander, Arthur, B.S..... | New York |
| Hugg, John Henry, B.S..... | Pennsylvania |
| Hunt, Josiah Arnold, B.S..... | Maryland |
| Jordan, William Pritchard, B.S. | |
| | North Carolina |
| Kaminsky, Aaron Louis, B.S.... | New Jersey |
| Kane, Harry Francis, A.B..... | Maryland |
| Keller, Michael Lawrence..... | New Jersey |
| Klein, Harold Henry..... | Pennsylvania |
| Klompus, Irving, A.B..... | New Jersey |
| Knowles, Frederick Edwin, Jr., B.S. | |
| | New Jersey |
| Laino, Frank Armento, B.S..... | Maryland |
| Lane, Edwin Charles, A.B..... | New Jersey |
| Layton, Caleb Rodney..... | New York |
| Lewis, Archie Clifton, B. S..... | Maryland |
| Lichtenberg, Walter, B.S., M.A. | New York |
| Lieb, Saul, A.B..... | New Jersey |
| Llewelyn, Louis Grandin, A.B.. | Maryland |
| MacLaughlin, Donald Clay, A.B. | |
| | Maryland |
| Marek, Charles Bernard..... | Maryland |
| Mays, Howard Brooks..... | Maryland |
| McDonough, Oscar Tracy, Jr., A.B. | |
| | Pennsylvania |
| McGregor, Alpine Watson..... | Utah |
| McGregor, Lorenzo Watson..... | Utah |
| McHenry, DeArmond John, B.S. | |
| | Pennsylvania |
| Mech, Karl Frederick, B.S..... | Maryland |
| Mills, Lawrence Hoy, A.B., B.S. | |
| | West Virginia |
| Montgomery, Bruce..... | Pennsylvania |
| Noon, Milton Alexander..... | Maryland |
| Owen, Philip..... | New Jersey |
| Pepe, Anthony James, B.S.... | Connecticut |
| Raffel, William..... | Maryland |
| Reier, Charles Henry..... | Maryland |
| Roberts, David P..... | Maryland |
| Robinson, Harry Maximilian, Jr. | Maryland |
| Robinson, Milton Irving..... | New York |
| Rogers, Frank Tipton..... | Tennessee |
| Rosen, Israel, A.B..... | Maryland |
| Rosen, Sol Hyman..... | New Jersey |
| Rosenberg, Harold William, B.S. | |
| | New York |

Russell, John Carroll.....	Maryland	Vozel, Luther F.....	Maryland
Schlachman, Milton.....	Maryland	Waghelstein, Julius Meyer, B.S....	Maryland
Schmitt, George Fredrick, Jr....	Maryland	Warren, John McCullen, A.B.....	North Carolina
Schonfeld, Paul.....	Maryland		North Carolina
Shapiro, Joseph, A.B.....	New York	Williams, Jesse Frank, Jr., B.S....	West Virginia
Shapiro, Sydney Harold, B.S....	New York		
Shaul, John Melvin, A.B.....	New York	Williamson, Charles Vernon.....	Maryland
Siscovick, Milton.....	Maryland	Wilson, Norman James, B.S....	Maryland
Skeen, Leo Brown.....	North Carolina	Wode, Alvin Eugene William....	Maryland
Spitznagle, Vernon Edward, B.S....	Maryland	Wood, Everet Hardenbergh, A.B....	New Jersey
Stein, Benjamin Maxwell, B.S....	New York		New Jersey
Teitel, Louis, B.S.....	New York	Woodward, Lewis Klair, Jr., A.B....	Maryland
Teitelbaum, Harry Allen, B.S....	New York		
Tuby, Joseph, B.S.....	New York		

HONORS

University Prize Gold Medal.....GEORGE FREDRICK SCHMITT, JR.

CERTIFICATES OF HONOR

WALTER LICHTENBERG
EDWARD FRANCIS COTTER

NORMAN JAMES WILSON
JOHN WARREN ALBRITTAİN

DOUGLAS RUDE DODGE

PRIZE

The Doctor A Bradley Gaither Memorial Prize of \$25.00 for the best work in genito-urinary surgery during the senior year.....EDWARD FRANCIS COTTER

DEGREE CONFERRED SEPTEMBER 15, 1934

NATHAN RUDO.....Maryland

INTERNESHIPS—CLASS OF 1934

Abramovitz, Leonard Jerome.....Sinai Hospital, Baltimore, Maryland
Adams, Thurston Ray.....University Hospital, Baltimore, Maryland
Austraw, Henry Harrison.....St. Joseph's Hospital, Baltimore, Maryland
Bayer, Ira Eugene.....Mercy Hospital, Baltimore, Maryland
Bayley, George Schwing.....Mercy Hospital, Baltimore, Maryland
Berenstein, Stanley Harry.....Emergency Hospital and Central Dispensary, Washington, D. C.
Blum, Louis Vardee.....St. Francis Hospital, Wilmington, Delaware
Brodey, David Franklin.....Elizabeth General Hospital, Elizabeth, New Jersey
Burgtorf, George Edward.....University Hospital, Baltimore, Maryland
Campbell, Edgar Thrall.....Mercy Hospital, Baltimore, Maryland
Caples, Delmas.....University Hospital, Baltimore, Maryland
Carliner, Paul Elliott.....Sinai Hospital, Baltimore, Maryland
Coates, Stephen Paul.....Baltimore City Hospitals, Baltimore, Maryland—6 months
Hartford Hospital, Hartford, Connecticut—18 months
Cohen, Lawrence Jack.....Sinai Hospital, Baltimore, Maryland
Cooper, Jules.....Beth-El General Hospital, Colorado Springs, Colorado

Deitz, Joseph Robert.....	St. Francis Hospital, Trenton, New Jersey
Diener, Samuel.....	Baltimore City Hospitals, Baltimore, Maryland
Dorman, George Edward.....	Mercy Hospital, Pittsburgh, Pennsylvania
Downey, Regis Fallon.....	Mercy Hospital, Baltimore, Maryland
Dreher, Robert Hering.....	Sacred Heart Hospital, Allentown, Pennsylvania
Dunbar, John Charles.....	St. John's General Hospital, Pittsburgh, Pennsylvania
Echols, John Edward.....	Baltimore City Hospitals, Baltimore, Maryland
Farr, Robert Wilbur.....	University Hospital, Baltimore, Maryland
Fearing, William Lumsden.....	University Hospital, Baltimore, Maryland
Feldman, Leon Henry.....	Baltimore City Hospitals, Baltimore, Maryland
Finegold, Joseph.....	Montefiore Hospital, Pittsburgh, Pa.
Gaskel, Jason Howard.....	South Baltimore General Hospital, Baltimore, Maryland
Gelb, Jerome.....	Beth Israel Hospital, Newark, New Jersey
Gelman, Sidney.....	Barnert Memorial Hospital, Paterson, New Jersey
Goldman, Abram.....	Dr. E. C. Hazard Hospital, Long Branch, New Jersey
Goldstone, Herbert.....	University Hospital, Baltimore, Maryland
Goodhand, Charles Luther.....	University Hospital, Baltimore, Maryland
Goodman, Howard.....	Passavant Hospital, Pittsburgh, Pennsylvania
Gordon, Joseph.....	Manhattan General Hospital, New York City
Gutman, Isaac.....	Michael Reese Hospital, Chicago, Illinois
Hanigsberg, Murray Joseph.....	Harlem Hospital, New York City
Healy, Robert Fairbank.....	St. Agnes Hospital, Baltimore, Maryland
Hoffman, Edward Sayer.....	Highland Hospital of Rochester, Rochester, New York
Horan, William Henry.....	St. Vincent's Hospital, New York City
Howard, William Lawrence.....	University Hospital, Baltimore, Maryland
Hummel, Leonard Malcolm.....	West Baltimore General Hospital, Baltimore, Maryland
Hurwitz, Abraham.....	Sinai Hospital, Baltimore, Maryland
Insley, Philip Asbury.....	Maryland General Hospital, Baltimore, Maryland
Janney, Nathan Bonney.....	Sinai Hospital, Baltimore, Maryland
Jerardi, Joseph Victor.....	Mercy Hospital, Baltimore, Maryland
Johnson, Thorwald.....	Alameda County Hospital, Oakland, California
Kafer, Oscar Adolph.....	City Memorial Hospital, Winston-Salem, North Carolina
Kallins, Edward Selig.....	Sinai Hospital, Baltimore, Maryland
Katz, Simon.....	Beth-El Hospital, Brooklyn, New York
Ketz, Wesley John.....	Church Home and Infirmary, Baltimore, Maryland
Knoll, William.....	Misericordia Hospital, New York City
Lawler, Thomas Gorman.....	San Francisco Hospital, San Francisco, California
Leass, Reuben.....	Trinity Hospital, Brooklyn, New York
Leavitt, Abraham Charles.....	Boston City Hospital, Boston, Massachusetts
Levin, Manuel.....	Mt. Pleasant Sanatorium, Reisterstown, Maryland
Levin, Milton.....	West Baltimore General Hospital, Baltimore, Maryland
Maginnis, Helen Irene.....	University Hospital, Baltimore, Maryland
Mains, Marshall Paul.....	Illinois Masonic Hospital, Chicago, Illinois
Marlett, Neumann Clyde.....	Mountainside Hospital, Montclair, New Jersey
McNally, Hugh Bernard.....	University Hospital, Baltimore, Maryland
Millett, Joseph.....	Maryland Tuberculosis Sanatorium—to Dec. 15th, 1934
	Gouverneur Hospital, New York City—Jan. 1, 1935
Mirow, Richard Raymond.....	Hospital for Joint Diseases, New York City
Moore, Alfred Charles.....	Mercy Hospital, Baltimore, Maryland
Moulton, Olin Cates.....	Bon Secours Hospital, Baltimore, Maryland

Mund, Maxwell Herschel.....Irvington General Hospital, Irvington, New Jersey
 Needleman, Max.....Beth Israel Hospital, New York City
 O'Connor, Raymond Francis.....Mercy Hospital, Pittsburgh, Pennsylvania
 Orans, Alfred Abraham.....Coney Island Hospital, Brooklyn, New York
 Rabinowitz, Jacob Herbert.....Jewish Hospital, St. Louis, Missouri
 Ray, William Turner.....Franklin Square Hospital, Baltimore, Maryland
 Reardon, William Thomas.....Delaware Hospital, Wilmington, Delaware
 Roberson, Edward Leon.....University Hospital, Baltimore, Maryland
 Rosen, Morris.....Northern Liberties Hospital, Philadelphia, Pennsylvania
 Rosenthal, Charles Morton.....Metropolitan Hospital, Welfare Island, New York City
 Rudo, Nathan.....Virginia Baptist Hospital, Lynchburg, Virginia
 Sacks, Milton Samuel.....Northern Liberties Hospital, Philadelphia, Pennsylvania
 Sasscer, James Ghiselin.....Mercy Hospital, Baltimore, Maryland
 Satulsky, Emanuel Milton.....Elizabeth General Hospital, Elizabeth, New Jersey
 Schwartz, Daniel James.....Sinai Hospital, Baltimore, Maryland
 Schwartz, Theodore Allison.....Mercy Hospital, Baltimore, Maryland
 Sedlacek, Joseph Arthur.....Church Home and Infirmary, Baltimore, Maryland
 Sekerak, Richard John Stephen.....Mercy Hospital, Baltimore, Maryland
 Siegel, Benjamin Israel.....Post Hospital, Fort Moultrie, South Carolina
 Siegel, Milton.....Bronx Hospital, Bronx, New York
 Smith, William Benjamin.....Maryland General Hospital, Baltimore, Maryland
 Snyder, John Newcomer.....Uniontown Hospital, Uniontown, Pennsylvania
 Sollod, Bernard Walter.....Sinai Hospital, Baltimore, Maryland
 Soltz, William Boyer.....Bronx Hospital, New York City
 Sproul, Dorothy Gertrude

University of California Medical School and Hospital, San Francisco,
 California

Stein, Milton Robert.....South Baltimore General Hospital, Baltimore, Maryland
 Stephens, Wilson Paschall.....Maryland General Hospital, Baltimore, Maryland
 Stutzman, Clyde Malverne.....Williamsport Hospital, Williamsport, Pennsylvania
 Sugar, Samuel Jacob.....Swedish Hospital, Brooklyn, New York
 Sutton, Harold Lawrence.....Lenox Hill Hospital, New York City
 Taylor, Andrew Du Val.....University Hospital, Baltimore, Maryland
 Terman, Irving.....Sydenham Hospital, New York, New York
 Timberlake, Landon.....Union Memorial Hospital, Baltimore, Md.
 Tuerk, Isadore.....Baltimore City Hospitals, Baltimore, Maryland
 Udkow, Samuel.....Gouverneur Hospital, New York, New York
 Wagner, Richard.....St. Elizabeth Hospital, Elizabeth, New Jersey
 Warshawsky, Harry.....Trinity Hospital, Brooklyn, New York
 Wilder, Earle Maurice.....West Baltimore General Hospital, Baltimore, Maryland
 Wolfe, William David.....South Baltimore General Hospital, Baltimore, Maryland
 Zurawski, Charles.....St. Mary of Nazareth Hospital, Chicago, Illinois

MATRICULATES

FOURTH YEAR CLASS 1934-35

Adelman, Milton Harris, B.S....	New York	Anderson, John Bascom, A.B.	
Albrittain, John Warren, B.S....	Maryland		North Carolina
Alessi, Edward James.....	Maryland	Aungst, Melvin Rauch.....	Pennsylvania
Alonso, Miguel, B.S.....	Puerto Rico	Barnes, Henry Eugene, Jr., B.S.	
Alpert, George, A.B.....	Massachusetts		North Carolina

- Battaglia, Dominic Thomas, B.S. Maryland
 Bierer, Dan George, B.S. Pennsylvania
 Bock, Charles Aloysius, B.S. Pennsylvania
 Brouillet, George Hector, B.S. Massachusetts
 Bunn, James Pettigrew, Jr., B.S. North Carolina
 Cassidy, William Adrian, A.B. Maine
 *Coplin, George Joseph, B.S. New Jersey
 Cornbrooks, Ernest Ivon, Jr., A.B. New Jersey
 Cotter, Edward Francis. Maryland
 Cutler, Frank Henry, A.B. Utah
 Dickey, Francis George, A.B. Maryland
 Diehl, Earl Henry. Maryland
 Dodge, Douglas Rude. Michigan
 Doerner, Alexander Andrew, A.B. New York
 Du Bois, Robert Lionel. Connecticut
 Dunnigan, William Charles, A.B. Maryland
 Einhorn, Samuel Edward, B.S. New Jersey
 Ewald, August Ludwig, Jr., B.S. Maryland
 Fader, Ferdinand, A.B. New Jersey
 Freeman, Irving, B.S. Maryland
 Fruchtbaum, Robert Pearson, B.S. New Jersey
 Galitz, Philip Jacob, M.A. New York
 Gerwig, Walter Henry, Jr. West Virginia
 Godbey, John Randolph. West Virginia
 Grenzer, William Howard, A.B. Maryland
 Gross, Joseph Bernard. Maryland
 Hammill, Gerard Paul, B.S. Pennsylvania
 Hamrick, John Carl, B.S. North Carolina
 Harris, Aaron. Maryland
 Hartman, Ira Frank, A.B., B.S. West Virginia
 Heghinian, Jeannette Rosaline E. Maryland
 Helfrich, William Goldsborough, B.S. Maryland
 Herald, James Kennedy. Ohio
 Herrold, Lewis Charles, B.S. Pennsylvania
 Hollander, Arthur, B.S. New York
 Hugg, John Henry, B.S. Pennsylvania
 Hunt, Josiah Arnold, B.S. Maryland
 Jordan, William Pritchard, B.S. North Carolina
 Kaminsky, Aaron Louis, B.S. New Jersey
 Kane, Harry Francis, A.B. Maryland
 Keller, Michael Lawrence. New Jersey
 Klein, Harold Henry. Pennsylvania
 Klompus, Irving, A.B. New Jersey
 Knowles, Frederick Edwin, Jr., B.S. New Jersey
 Laino, Frank Armento, B.S. Maryland
 Lane, Edwin Charles, A.B. New Jersey
 Layton, Caleb Rodney. New York
 * Did not complete the year.
 Lewis, Archie Clifton, B.S. Maryland
 Lichtenberg, Walter, B.S., M.A. New York
 Lieb, Saul, A.B. New Jersey
 Llewelyn, Louis Grandin, A.B. Maryland
 MacLaughlin, Donald Clay, A.B. Maryland
 Marek, Charles Bernard. Maryland
 Mays, Howard Brooks. Maryland
 McDonough, Oscar Tracy, Jr., A.B. Pennsylvania
 McGregor, Alpine Watson. Utah
 McGregor, Lorenzo Watson. Utah
 McHenry, DeArmond John, B.S. Pennsylvania
 Mech, Karl Frederick, B.S. Maryland
 Mills, Lawrence Hoy, A.B., B.S. West Virginia
 Montgomery, Bruce. Pennsylvania
 Noon, Milton Alexander. Maryland
 Owen, Philip. New Jersey
 Pepe, Anthony James, B.S. Connecticut
 Raffel, William. Maryland
 Reier, Charles Henry. Maryland
 Roberts, David P. Maryland
 Robinson, Harry Maximilian, Jr. Maryland
 Robinson, Milton Irving. New York
 Rogers, Frank Tipton. Tennessee
 Rosen, Israel, A.B. Maryland
 Rosen, Sol Hyman. New Jersey
 Rosenberg, Harold William, B.S. New York
 Russell, John Carroll. Maryland
 Schlachman, Milton. Maryland
 Schmitt, George Fredrick, Jr. Maryland
 Schonfeld, Paul. Maryland
 Shapiro, Joseph, A.B. New York
 Shapiro, Sydney Harold, B.S. New York
 Shaul, John Melvin, A.B. New York
 Siscovick, Milton. Maryland
 Skeen, Leo Brown. North Carolina
 Spitznagle, Vernon Edward, B.S. Maryland
 Stein, Benjamin Maxwell, B.S. New York
 Teitel, Louis, B.S. New York
 Teitelbaum, Harry Allen, B.S. New York
 Tuby, Joseph, B.S. New York
 Vozel, Luther F. Maryland
 Waghelstein, Julius Meyer, B.S. Maryland
 Warren, John McCullen, A.B. North Carolina
 Wheless, James Block, B.S. North Carolina
 Williams, Jesse Frank, Jr., B.S. West Virginia
 Williamson, Charles Vernon. Maryland
 Wilson, Norman James, B.S. Maryland
 Wode, Alvin Eugene William. Maryland
 Wood, Everet Hardenbergh, A.B. New Jersey
 Woodward, Lewis Klair, Jr., A.B. Maryland

THIRD YEAR CLASS 1934-35

- Batalion, Abraham Louis. Maryland
 Beers, Reid Lafeal, A.B. Utah
 Bernstein, Milton, A.B. Maryland
 Bieren, Roland Essig. Maryland
 Booth, Harold Thomas, A.B. New York
 Bowie, Harry Clay, B.S. Maryland
 Bunn, James Harry, Jr., B.S. North Carolina
 Burka, Irving, B.S. . . . District of Columbia
 Burns, Harold Hubert. Pennsylvania
 Burton, Jerome Kermit. Maryland
 Bush, Joseph Edgar, A.B. Maryland
 Chesson, Andrew Long. North Carolina
 Ctibor, Vladimir Frantisek, A.B. New Jersey
 Czekaj, Leo Michael. Maryland
 Davidson, Nachman, A.B. Maryland
 Davis, George Howey, B.S. Maryland
 Deehl, Seymour Ralph, B.S. New Jersey
 Deradorian, Neshon Edward, B.S. Connecticut
 Dittmar, Stuart Watt. Pennsylvania
 Dixon, Darius McClelland, B.S. Maryland
 Drozd, Joseph. Maryland
 Feldman, Jerome. Maryland
 Fissel, John Edward, Jr., B.S. Maryland
 Fox, Lester Mitchell. Maryland
 Franklin, Philip Lair. Maryland
 Frich, Michael Garland. Pennsylvania
 Gillis, Marion Howard. Maryland
 Gimbel, Harry Solomon, A.B. Maryland
 Glassner, Frank. Maryland
 Gordner, Jesse Walter, Jr., B.S. Pennsylvania
 Greengold, David Bernard, A.B. Maryland
 Gregory, Philip Orson. Maine
 Greifinger, William, A.B. New Jersey
 Grollman, Jaye Jacob. Maryland
 Herman, Daniel Loeb, A.B. Maryland
 Isaacs, Benjamin Herbert, A.B. Maryland
 Jones, Ceirianog Henry. Pennsylvania
 Jones, Emory Ellsworth, Jr. West Virginia
 Karfgin, Walter Esselman, B.S. Maryland
 Karpel, Saul, B.S. New York
 Katz, Joseph. Maryland
 Kleiman, Norman, A.B. Maryland
 Knobloch, Howard Thomas, B.S. Pennsylvania
 Kolodner, Louis Joseph. Maryland
 Kroll, Louis Joseph, A.B. Maryland
 Lipin, Raymond Joseph. Maryland
 Lowman, Robert Morris. Maryland
 Lund, Grant. Utah
 Mansfield, William Kenneth. Pennsylvania
 Maser, Louis Robert. Maryland
 McCauley, Arthur Franklin, B.S. Maryland
 McKnew, Hector Caldwell, Jr. Maryland
 McNinch, Eugene Robinson, B.S. Pennsylvania
 Moran, James Blessing, Ph.B. Rhode Island
 Moran, James Patrick, B.S. New York
 Moses, Benjamin Bernard. Maryland
 Myerovitz, Joseph Robert. Maryland
 Myers, William, B.S. Pennsylvania
 Nester, Hansford Dorsey, A.B., B.S. West Virginia
 Nestor, Thomas Agnew, Ph.B. Rhode Island
 Nicholson, Morris John, B.S. Maryland
 Nowak, Sigmund Roman, B.S. Maryland
 O'Brien, William Aloysius, Jr., A.B. New Jersey
 O'Nolan, Martin James, B.S. Ireland
 Parr, William Andrew. Maryland
 Pembroke, Richard Heber, Jr., A.B. Maryland
 Pentecoste, Salvador Dante, B.S. New Jersey
 Pigman, Carl, B.S. Kentucky
 Reichel, Samuel Marvin, A.B. Maryland
 Reynolds, John Henry, Jr. Pennsylvania
 Rochlin, Narcisse. Maryland
 Roseman, Ralph Bernard, A.B. Pennsylvania
 Rosenthal, Victor, B.S. New York
 Royster, James Dan, B.S. North Carolina
 Schmieler, George Peter, B.S. Pennsylvania
 Selby, George Durward, A.B. Maryland
 Shimanek, Lawrence Joseph. Maryland
 Smith, William Carey. North Carolina
 Solomon, Cyril. Maryland
 Sorin, Matthew. New Jersey
 Spain, David Michael. New York
 Squires, Millard Fillmore, Jr. Maryland
 Stapen, Milton Honore, B.S. New York
 Stecher, Joseph Louis. Maryland
 Steinberg, Samuel. Maryland
 Stern, Morris Harold, B.S. New Jersey
 Sunday, Stuart Dos Passos, A.B. Maryland
 Terr, Isaac, B.S. New York
 Thomas, Anthony Joseph, Ph.B. Massachusetts
 Tierney, Lawrence Matthew. Connecticut
 Troutman, Baxter Suttles, B.S. North Carolina
 Vieweg, George Louis, Jr. West Virginia
 Waller, William Kennedy, A.B. Maryland
 Wehner, Daniel George. Maryland
 Weinstein, Jack Joseph. Maryland
 Wells, Gibson Jackson, A.B. Maryland
 Wilfson, Daniel, Jr., A.B. Maryland
 Wilkinson, Arthur Gilbert, A.B. Connecticut
 Wolf, Nathan. Maryland
 Yavelow, Charles Sidney, A.B. New York
 Zimring, Joseph George, B.S. New York

SECOND YEAR CLASS 1934-35

- Abbott, Thomas Gilbert.....Maryland
 Bank, R. Stanley, A.B.....Maryland
 Barnett, Ernest, B.S.....New York
 Bereston, Eugene Sydney, A.B...Maryland
 *Bowers, John Zimmerman, B.S..Maryland
 Brill, Leonard.....Maryland
 Burtneck, Lester Leon.....Maryland
 Carlson, Carl Edwin.....Connecticut
 Casanova, José Ramón.....Puerto Rico
 Christensen, Roland Arnold..Pennsylvania
 Cocimano, Joseph Michael
 District of Columbia
 Cooney, Robert Francis.....Pennsylvania
 Coughlan, Stuart Gray, B.S....Maryland
 Daily, Louis Eugene.....Maryland
 D'Alessio, Charles Magno, B.S.
 Connecticut
 D'Amico, Thomas Vincent, A.B.
 New Jersey
 Davidson, Eli, B.S.....New York
 Diggs, Everett Schnepfe.....Maryland
 Eisner, William Monroe, B.S....New York
 Ellison, Emanuel Simon, B.S....Maryland
 Ensor, Helen Robinson.....Maryland
 Finn, John Hannon, A.B....Massachusetts
 Frenkil, James.....Maryland
 Frohman, Isaac.....Maryland
 Gehlert, Sidney Richard, A.B..Maryland
 Gillespie, John Lawrence, B.S..New Jersey
 Goffin, Herbert, B.S.....New York
 Goldberg, Sigmund.....Maryland
 Gordon, William Cecil, A.B....New York
 Gore, Robert Joseph, A.B.....Maryland
 Gottdiener, Elvin Edward.....Maryland
 Greenwald, Frank, A.B.....New York
 Hahn, Charles Solomon, B.S....New York
 Hedrick, Grover Cleveland, Jr.
 West Virginia
 Highstein, Benjamin.....Maryland
 Hochfeld, Leo, B.S.....New York
 Hodgson, Eugene Welch.....Pennsylvania
 Hoffman, Charles Wilbur, Jr....Maryland
 Humphries, William Coolidge, A.B.
 Maryland
 Insley, James Knox, Jr., A.B....Maryland
 Jackson, Samuel, B.S.....New York
 Jacobson, Isadore Alan, A.B....Maryland
 Johnston, Clarence Frederick, Jr., A.B.
 Maryland
 Jones, James Porter.....West Virginia
 Kadan, James Earl, A.B.....Maryland
 Kagen, Gordon Arthur, A.B..Pennsylvania
 Kaltreider, D. Frank Olewiler, Jr., A.B.
 Pennsylvania
 Kaplan, Isadore.....Maryland
 Kaplan, Jack Allen, B.S.....New York
 Kaplan, Nathan, A.B.....Maryland
 Katz, Albert Herbert, A.B.....Maryland
 Katz, Isadore, M.S.....New York
 Kemick, Irvin Bernard.....Maryland
 Klemkowski, Irvin Philip, A.B...Maryland
 Kolman, Lester Norman.....Maryland
 Kunkowski, Mitchell Frank, B.S.Maryland
 La Mar, David William.....Maryland
 Leskin, Louis Woron, B.S.....New York
 Levine, Leonard Warren, B.S....Connecticut
 Levinson, Leonard Jules, B.S....New York
 Linhardt, Elmer George.....Maryland
 Lisansky, Ephraim Theodore, A.B.
 Maryland
 Long, William Broughton, Jr., B.S.
 Maryland
 Lubinski, Chester James, A.B...Maryland
 Mackowiak, Stephen Casimir...Maryland
 Manieri, Frank Vincent, B.S....Maryland
 Marino, Irene Thelma.....New York
 Matheke, Otto George, Jr., B.S.
 New Jersey
 Meyer, Milton Joseph, B.S.....New York
 Muller, Stephen Edwin.....Maryland
 Muse, Joseph Ennalls, B.S.....Maryland
 Myers, Philip, A.B.....Maryland
 Nataro, Maurice, B.S.....New Jersey
 Novey, Samuel.....Maryland
 Owens, Richard Spurgeon, Jr., B.S.
 Virginia
 Pass, Isidore Earl.....Maryland
 Pavlatos, August Constantine, B.S.
 Pennsylvania
 Perlman, Lawrence, B.S.....New York
 Piccolo, Pasquale Albert, B.S..Connecticut
 Pokrass, Frederick Phillip, A.B.
 Pennsylvania
 Resnick, Elton.....Maryland
 Revell, Samuel Thompson Redgrave,
 Jr., B.S.....Georgia
 Rigdon, Henry Lewis.....Maryland
 Robins, Isadore Morris, A.B..Pennsylvania
 Robinson, Martin Herman, A.B.
 Pennsylvania
 Rochkind, Reuben, A.B.....Maryland
 Roseman, Ephraim, A.B.....Maryland
 Rubin, Morris, A.B.....Connecticut
 Rudman, Gilbert Elmore, A.B...Maryland
 Safran, Sidney.....Maryland
 Sakowski, John Paul.....New Jersey
 Sartorius, Norman Ellis, Jr., A.B.
 Maryland
 Scarborough, Clarence Parke, A.B.
 Pennsylvania
 Schmidt, Jacob Edward.....Maryland
 Seegar, John King Beck Emory, Jr., A.B.
 Maryland
 Seidel, Joshua, A.B.....Maryland
 Semoff, Milton C. F., B.S.....New York
 Shapiro, Abraham, B.S.....Maryland
 Shear, Meyer Robert.....Maryland
 Spielman, Morton Marvin, B.S..Maryland
 Stapen, Mannie, B.S.....New York

* Did not complete the year.

Statman, Bernhardt Joseph, B.S.	Maryland
Steiner, Albert	New Jersey
Sullivan, Thomas John, B.S.	Maryland
Swalsky, Sydney, B.S.	New Jersey
Thompson, James Upshur, A.B.	Connecticut
Trupp, Mason, B.S.	Maryland
Weems, George Jones, A.B.	Maryland
Weiss, Henry Wolf, B.S.	New York
Whitworth, Frank Dixon	Maryland
Wilkin, Mabel Giddings, M.A.	Texas
Williams, Richard Jones, A.B.	Maryland
Williams, Robert Roderic, A.B.	New York
Wolff, Eldridge Henry	Maryland
Woodrow, Jack Henry, A.B.	New York
Zacek, Frank Anthony	Massachusetts
Zeligman, Israel, A.B.	Maryland

FIRST YEAR CLASS 1934-35

Abarbanel, Milton G., B.S.	New Jersey
*Abrahams, John James, Jr.	Maryland
Abramson, Daniel Jerome	Maryland
Applefeld, Willard	Maryland
Asimakes, Charles Peter, B.S.	Maryland
Barenburg, Clara, B.S.	Maryland
Baum, Max, A.B.	Maryland
Blandford, Alma, B.S.	Maryland
Bonner, Robert Alexander, Jr.	Connecticut
Borden, Melvin Nachlas, A.B.	Maryland
Bradley, Stanley Edward, A.B.	Maryland
Brooks, Wilbur Starr, A.B.	Connecticut
Brown, Manuel	Maryland
Bunting, John James	New Jersey
Callahan, Timothy Andrew, Jr.	Maryland
Chance, Burton, Jr.	Pennsylvania
Cohen, Hilliard	Maryland
Colleran, Harold Leo, B.S.	Pennsylvania
Coolahan, John Francis, B.S.	Maryland
Cooper, Donald Dwight, A.B.	Maryland
Costas, Jaime Luis	Puerto Rico
Cowherd, William Jerome	Maryland
Crawford, Robert Clifford, A.B.	Maryland
Dausch, Michael Joseph	Maryland
Dodd, William Anthony	Maryland
Dolfman, Victor, A.B., M.S.	Pennsylvania
Eichert, Arnold Herman	Maryland
Feder, Aaron	New York
Fox, Lester Irving, A.B.	Massachusetts
Fox, Samuel Louis	Maryland
Gareis, Louis Calvin	Maryland
George, Joseph Mathias, Jr., A.B.	Maryland
Gertman, Samuel, A.B.	Maryland
Ginsberg, Milton, A.B.	Maryland
Glassman, Edward Lewin	Maryland
Goodman, Louis E., Jr., A.B.	Maryland
Goodman, Sylvan Chauncey	Maryland
Gottdiener, Florence Hazel	Maryland
Govons, Sidney Robert	Maryland
Graff, Frederick Lewis, A.B.	West Virginia
Guyton, William Lehman	Maryland
Haase, John Henry	Maryland
Harris, Sidney, A.B.	New Jersey
Hayleck, Mary Lodema, A.B.	Maryland
Horky, John Ralph	Maryland
*Jannarone, Lewis Henry	New Jersey
Januszkeski, Francis Joseph	Maryland
Katz, Gabriel Elliott	Maryland
Katz, Milton Aaron, A.B.	Maryland
Kelmenson, Harry	Maryland
Knox, John Joseph, B.S.	Pennsylvania
Kotleroff, Jerome, B.S.	New York
Kump, Albert Barker	New Jersey
Kurtz, Gerald Independence, A.B.	New Jersey
Kyle, Henry Hall	Maryland
Ladensky, Milton, A.B.	Maryland
Lauve, Celeste Constance	Maryland
Lenker, Luther Albert, B.S.	Pennsylvania
Lipsitz, Morton Hirsch, B.S.	Maryland
Lopez, Hilton Luis	Puerto Rico
Lumpkin, William Randolph	Maryland
Magness, Stephen Lee, A.B.	Maryland
*Meyer, Charles Nathaniel, A.B.	Maryland
Michaelson, Ernest	Maryland
Milholland, Arthur Vincent, A.B.	Maryland
Miller, Clarence Lee	Missouri
Miller, Royston	Maryland
Miniszek, James Haight	Maryland
Molofsky, Leonard Carl	Maryland
Palmer, David Waugh	West Virginia
Post, Laurence Caldwell, B.S.	West Virginia
Powell, Geraldine Kennedy, A.B.	Maryland
Rizzolo, John	New Jersey
Roman, Paul, A.B.	Maryland
Rossello, Juan A.	Puerto Rico
Rothkopf, Henry	New York
Sabatino, Bernard Joseph, A.B.	Maryland
Sarajian, Aram Martyr, A.B.	New Jersey
Schaefer, John Ferdinand	Maryland
Schammel, Adam John	Maryland
Schenthal, Joseph Edwin, A.B.	Maryland
Scherlis, Sidney, A.B.	Maryland
Schlesinger, Robert Abraham	New York
Scott, John Matthai	Maryland
Sevcik, Charles Vincent	Maryland
*Seymour, William Abercrombie, B.S.	Maryland
Sharp, Martin Burke, B.S.	Maryland
Sheppard, Robert Clay	Maryland
Siegel, Edward, M.A.	New York
Silberman, Donald Jared, A.B.	Alabama
Smith, John P., A.B.	Maryland
Sprei, Emanuel, M.S.	New York
Stein, Aaron, A.B.	Maryland
Steinberg, Morris William	Maryland

* Did not complete the year.

* Did not complete the year.

Swiss, Adam George.....	Maryland	Warres, Herbert Leonard, B.S....	New York
Taliaferro, William Booth.....	Virginia	Weisberg, Millard.....	Maryland
Thomas, Bernard Oscar.....	Maryland	Welfeld, Alvan Abram, A.B.....	Maryland
Thompson, Winfield Lynn.....	Maryland	White, Harry Fletcher, Jr.....	Maryland
Twardowicz, Albin Harry, B.S....	Maryland	White, Samuel Cottrell.....	Maryland
*Ullman, Alfred Jr., A.B.....	Maryland	Winer, Albert Sidney, A.B.....	Maryland
Urlock, John Peter, Jr.....	Maryland	Woodward, Theodore Englar, B.S.	Maryland
Vollmer, Frederick Joseph, B.S....	Maryland		
Wagner, John Alfred, B.S.....	Maryland	Worthington, Richard Walker, Jr.	Maryland
Wanner, Jesse Rosenberger, Jr....	Maryland		
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		Yaffe, Kennard Levinson.....	Maryland

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I give, devise and bequeath to the Regents of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic.....

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The University of Maryland School for Nurses was established in the year 1889. Since that time it has been an integral part of the University of Maryland, coming under the same government. It is a non-sectarian school, the only religious services being morning prayers.

The University Hospital is a general hospital containing about 400 beds. It is equipped to give young women a thorough course of instruction and practice in all phases of nursing.

Programs Offered: The programs of study of the school are planned for two groups of students: (a) the five-year group, (b) the three-year group.

The requirements for admission to the five-year program of the School of Nursing are the same as for other colleges of the University. The completion of this course entitles the student to the degree of Bachelor of Science from the University of Maryland and to the diploma of the University Hospital School of Nursing.

The requirements for admission to the three year program are the satisfactory completion of an academic course in an approved high school. The completion of this course entitles the student to the diploma of the University of Maryland School of Nursing. Blank certificates will be furnished upon application to the Director of the School of Nursing.

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The Mercy Hospital School of Nursing was established in 1899 and incorporated on December 23, 1901. It has developed the art of the profession according to the high standard necessary to qualify as a Registered Nurse.

The rapid growth of the institution, attested by the increasing number of its graduates, is evidence of the active part it takes in the health of the community. Through its connection with the Mercy Hospital its opportunities are unlimited. By its affiliation with the University of Maryland it has the advantage of the best professors for the instruction of the nurses.

The University of Maryland, in affiliation with the Mercy Hospital School of Nursing, offers a five year combined Academic and Nursing program. The completion of this course entitles the student to the degree of Bachelor of Science from the University of Maryland, and to the diploma of the Mercy Hospital School of Nursing. Graduate nurses who hold college degrees are greatly in demand, especially for positions in administration and teaching institutions. This program consequently offers a distinct advantage.

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